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REVIEW OF THE EGG PRODUCTS INSPECTION ACT

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ORIGINAL

HEARING

BEFORE THE

SUBCOMMITTEE ON LIVESTOCK, DAIRY, AND POULTRY

OF THE

COMMITTEE ON AGRICULTURE
HOUSE OF REPRESENTATIVES

NINETY-NINTH CONGRESS

FIRST SESSION

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[1] Effective only for the first session of the Ninety-ninth Congress.

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REVIEW OF THE EGG PRODUCTS INSPECTION ACT

THURSDAY, NOVEMBER 21, 1985

House of Representatives,
Subcommittee on Livestock, Dairy, and Poultry,
Committee on Agriculture,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:25 a.m., in room 1300, Longworth House Office Building, Hon. Tony Coelho (chairman of the subcommittee) presiding.

Present: Representatives Volkmer, Olin, Penny, Stenholm, Bedell, Jeffords, Hopkins, Stangeland, and Lewis.

Also present: Representative Thomas, member of the committee.

Staff present: Phillip L. Fraas, counsel; Cristobal P. Aldrete, special counsel; Charles Hilty, minority staff director; Kathy Hughes and Francie Monaghan, clerks; Kim Schnoor, Courtney Pastrick, Jeffrey Weiss, Charles Rawls, Stephen R. Kerr, and John Conrad.

OPENING STATEMENT OF HON. TONY COELHO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. Coelho. The subcommittee will come to order.

We are meeting today to hear testimony regarding the Egg Products Inspection Act and further examine some of the issues which were raised in the debate on the floor of the House of Representatives regarding the use of mass egg-breaking machines as it relates to the EPIA.

As you all know, there was a provision in the 1985 omnibus farm bill as reported by the House Agriculture Committee which would have effectively precluded the use of mass egg-breaking machines in commercial and retail establishments. Under the terms of EPIA, official egg product plants which are USDA-inspected must meet very strict requirements which preclude the use of mass egg-breaking machines. However, these machines are presently being used by restaurants, commercial establishments, bakeries, hotels, and other similar establishments.

The provision in the bill would have precluded the further use of these machines, but the provision was deleted by an amendment on the floor of the House of Representatives. The debate which took place raised several issues regarding the safety of the machines and their use, as well as which agency of the Federal Government has the authority to regulate these machines.

In order to further examine these questions, the subcommittee is holding these hearings to hear testimony from the interested parties. I want to welcome all the witnesses today and thank them for taking the time to be here. I also want to indicate for the record that, pursuant to rule 3(g) of the Rules of the Committee on Agriculture, as a member of the House Committee on Agriculture Mr. Thomas will be sitting on the panel for this hearing but will not be testifying as the witness list indicates.

I am extremely disappointed that the Food and Drug Administration has chosen not to testify today, despite two letters requesting that they be here, as well as numerous conversations between subcommittee staff and FDA staff at my request. In lieu of testifying, FDA has sent a written response to my request, and I would like to enter their letter in the record at this time, without objection.

[The letter follows:]

BEST COPY A

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
Rockville MD 20857

November 21, 1985

The Honorable Tony Coelho
Chairman, Subcommittee on Livestock,
Dairy, and Poultry
Committee on Agriculture
House of Representatives
Washington, D.C. 20515

Dear Mr. Coelho:

This is in response to your November 4, 1985 letter to Dr. Sanford Miller, Director, Center for Food Safety and Applied Nutrition, and your November 19, 1985 letter to Frank E. Young, Commissioner of Food and Drugs, regarding jurisdiction and implementation of the Egg Product Inspection Act (EPIA).

As per your request, the following is a description of the Food and Drug Administration's (FDA) jurisdiction under the EPIA. The FDA has only limited authority under the EPIA to regulate eggs and egg products. This authority extends to assuring that the shell eggs received at food manufacturing establishments, institutions, and restaurants are not in a restricted category (i.e., cracked, contain blood spots, etc.) and that egg products are from a plant that has been inspected by U.S. Department of Agriculture (USDA). Our interpretation is that FDA's authority under EPIA does not extend to the regulation of the manufacturing practices, including equipment used for egg breaking operations, within those establishments.

Section 5(d) of the EPIA authorizes the Secretary of the Department of Health and Human Services to assure compliance with the requirements of section 8 of the Act, which enumerates "prohibited acts" (the Secretary has delegated this authority to the Commissioner of Food and Drugs). However, the prohibited acts that the FDA is authorized to enforce preclude only the receipt and use of restricted eggs except as authorized by regulations promulgated by the USDA. Under USDA regulations (Title 7, Code of Federal Regulations (CFR) Part 59), food manufacturing establishments, institutions and restaurants are permitted to receive shipment of eggs which contain no more restricted eggs than are allowed by the tolerance in the official standards of United States Consumer grades for shell eggs. This provision of the USDA regulation implements section 15(a)(1) of the EPIA. If the establishment receives eggs that are under the tolerance, FDA has no further authority under EPIA, with respect to any adulteration that might occur as a result of the manner in which the eggs are broken. If the establishment receives eggs that are over tolerance, the EPIA provides that USDA is to exercise regulatory jurisdiction.

Finally, the EPIA does not grant authority to the FDA to promulgate regulations to enforce the EPIA, except with respect to records (section 11). Accordingly, FDA does not have authority to promulgate regulations that would regulate the use of egg breaking equipment.

The Memorandum of Understanding (MOU) between Agricultural Marketing Services (AMS) and FDA, which became effective June 7, 1983, sets forth jurisdictional responsibilities of the two agencies. It provides that, as between FDA and AMS, FDA has exclusive jurisdiction to inspect food manufacturing establishments, institutions and restaurants, except where such establishments decide to break eggs below United States Consumer Grade B. In that case, the egg breaking operations in such establishments would become subject to AMS inspection. The MOU also provides that AMS is to notify FDA if it believes that shell eggs in violation of the Act have been shipped to an establishment under FDA's jurisdiction and FDA is to notify AMS if it finds that establishments that it inspects are receiving violative lots of eggs.

The FDA does have certain authority under the Federal Food, Drug, and Cosmetic Act (FDCA) to regulate the use of eggs in food manufacturing establishments, institutions and restaurants. The jurisdiction is subject to significant limits, however. Unlike the EPIA, which provides jurisdiction over all eggs whether or not they are in interstate commerce, the FDCA limits jurisdiction over food (including eggs) to that which is in interstate commerce. Thus, to regulate the breaking of eggs in a way that causes adulteration, FDA has to establish either that shell eggs were received in interstate commerce and adulterated in the breaking process, or that adulterated products made from the broken eggs are sold in interstate commerce. For this reason, and because of the existing regulatory activities of the states, FDA regulation of food in institutions, restaurants and many food manufacturing establishments such as bakeries has historically been limited. Moreover, FDA does not have binding regulations that could be used categorically to prevent use of egg breaking equipment that might be inherently unsafe. The Agency does not license, ban or otherwise categorically regulate specific equipment used in food processing and preparation under the authority of FDCA. Accordingly, regulation of eggs that were adulterated because of the use of certain egg breaking equipment would have to occur case-by-case, based on evidence of adulteration. Finally, while the FDCA permits judicial seizure, injunction and prosecution, it does not authorize the immediate remedy of administrative detention, as does the EPIA.

Since there will be no FDA witness present at this hearing, we would be pleased to answer any specific questions for the record that may arise at the hearing.

Sincerely yours,

Hugh C. Cannon

Hugh C. Cannon
Associate Commissioner
for Legislative Affairs

Mr. COELHO. The subcommittee intends to look into this matter further and perhaps examine this issue again with FDA present if, due to their absence, questions are left unanswered at today's hearing.

I would like to say at this point in the record that I personally am extremely disappointed that we can't get from USDA or FDA a clear understanding of who has jurisdiction in this particular matter. I assume as a result of today's hearing we will find that nobody claims jurisdiction and problems continue to exist as a result of it, but we will find that out as the hearing progresses and we will be somewhat insistent in this regard.

Congressman Rinaldo has requested that he be able to testify first due to a scheduling conflict with other committees, so I would like to welcome him here. Please proceed, Matt. Thank you for coming.

STATEMENT OF HON. MATTHEW J. RINALDO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Mr. RINALDO. Mr. Chairman, I certainly want to thank you. I appreciate your courtesy in allowing me to testify first. I have an amendment before the full Energy and Commerce Committee which is up just about at this time. I also want to take this opportunity to commend you for holding these hearings on this very important issue.

I was asked to testify by my constituent, Mr. Arthur Papetti of Elizabeth, NJ. Mr. Papetti's company, Hi Grade Egg Products, is the largest producer of liquid eggs in the United States. Not too long ago, I had the opportunity to tour Hi Grade Egg Products and to see firsthand the complex and innovative technical procedures employed there.

The plant I toured breaks 4 million eggs per day, and yet each egg is broken individually, the content of each egg is carefully inspected. The egg is also inspected by a human being who looks at each egg and smells each egg to determine its wholesomeness and fitness for human consumption. If a suspect egg is detected, the operator causes that egg to be discarded. It never touches any of the other eggs which are being processed.

The eggs are broken mechanically. They are broken in a fashion which does not allow the eggshell to commingle with the egg interior. I have witnessed this personally. In addition, the shells of the eggs, even eggs which have been washed and sanitized and appear perfectly clean, we have to understand can carry bacteria and salmonella.

After the eggs are carefully broken and inspected, they are pasteurized, tested for bacterial presence and, if necessary, repasteurized or destroyed. All of this takes place under the continuous presence and inspection of USDA.

This might sound like a very complicated way to accomplish the seemingly simple task of breaking eggs, but these extensive precautions and the stringent regulations established and enforced by USDA are absolutely necessary to prevent adulterated egg products from entering the Nation's food supply. That's why the Egg Products Inspection Act was enacted back in 1970.

That is also one of the reasons why we are here today. Despite the clear intent of Congress in 1970 that the appropriate departments of the Federal Government should establish and enforce regulations sufficient to protect the consumer from the unscrupulous, irresponsible, and unsafe processing of eggs, a situation has developed whereby hundreds of bakeries and restaurants across the country are doing exactly that. I am, of course, referring to the proliferating use of centrifuge egg-breaking machines in these and similar establishments.

Following enactment of the Egg Products Inspection Act, USDA established and enforced regulations which prohibit the use of centrifuge egg-breaking in official processing plants. Since 1947, when the egg processing inspection program was voluntary, USDA has prohibited centrifuge egg breaking because USDA has determined this practice to be patently unsafe.

A centrifuge may save a chef a little time because, instead of breaking eggs one-by-one, he or she can simply dump dozens of eggs straight from the carton in which they were transported, and then the machine crushes all of them and the liquid runs out a spout. Unfortunately, there is simply no way to get an eggshell clean enough to allow it to be safely commingled with the egg interior. There is also no way to guarantee the wholesomeness of every single egg sold to bakeries and restaurants, even if they were all grade AA eggs, according to testimony by the U.S. Department of Agriculture before the House Committee on Agriculture in July.

The use of the centrifuge poses a real and immediate threat to public health. As a matter of fact, in my home State of New Jersey there has already been an outbreak of salmonella as a result of the use of these machines, and the machines have been embargoed as a result of that outbreak. This incident happened in Atlantic City on October 24, 1985, just a short time ago.

After five individuals were hospitalized, the county health department was notified. The common food was scrambled eggs or French toast.

I guess that means my time——

Mr. Coelho. You have time. Go ahead.

Mr. Rinaldo. The municipal health department was notified and an inspection team was sent to Harrah's Hotel, where the incident had occurred. When these inspectors questioned individuals regarding the handling of eggs, they were advised they put them in the Egg Master. The Egg Master was inspected and found by the municipal health department to be unsafe because eggshells and dried eggs became embedded around the bottom of the machine.

I have a drawing that I would like to submit into the record, Mr. Chairman.

Mr. Coelho. Without objection, so ordered. The drawing will be included with your prepared statement.

Mr. Rinaldo. Thank you. That drawing will show where the embedded product was found. That particular machine was immediately embargoed.

Following this, the inspectors went to other hotels in Atlantic City and again found every single Egg Master machine to be faulty, inasmuch as eggshells and dried egg product were allowed to gather around the bottom of the machine. Therefore, the municipal health department embargoed all such machines in Atlantic City and will no longer permit their use. It is my understanding, also, that the municipal health department has submitted a report to the subcommittee which documents this in more detail.

In 1971, when the Egg Products Inspection Act was passed, USDA was given the authority and——

Mr. COELHO. Matt, excuse me just a minute. What did you just say?

Mr. RINALDO. It is my understanding that the municipal health department has submitted a report to the subcommittee which documents this in more detail.

Mr. COELHO. OK. We have it. I'm sorry.

Mr. RINALDO.OK. Thank you.

In 1971, when the Egg Products Inspection Act was passed, USDA was given the authority and the responsibility to establish and enforce regulations which would protect the consumer. The USDA accepted this responsibility and used their authority to shut down 700 to 800 processing facilities which were violating regulations at that time. Centrifuge egg breaking, as evidenced by what took place in Atlantic City just last month, is still unsafe, and in order to protect public health, should be stopped.

The U.S. Department of Agriculture appeared before the House Committee on Agriculture in July to testify that centrifuge egg breaking is unsafe. At that time the Department testified that it supported legislation which would prohibit the use of centrifuge egg breaking in bakeries and restaurants. In fact, the Department of Agriculture has prohibited the use of centrifuge egg breaking for over 15 years in official egg processing plants.

Mr. Chairman, it is my view that it is now time for the Department of Agriculture to act on the knowledge, experience, and convictions which it so clearly holds and has held in the past, and exercise the authority necessary to put an end to this unsafe practice.

Thank you very much.

[The prepared statement of Mr. Rinaldo follows:]

PREPARED STATEMENT OF HON. MATTHEW J. RINALDO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Mr. Chairman, Members of the Subcommittee. I appreciate the opportunity to speak before you today and commend the Subcommittee for holding hearings on this very important issue.

I was asked to testify by my constituent Mr. Arthur Papetti of Elizabeth, New Jersey. Mr. Papetti's company, Hi Grade Egg Products, is the largest producer of liquid eggs in the United States. Not too long ago I had the opportunity to tour Hi Grade Egg Products, and to see first-hand the complex technical procedures employed there. The plant I toured breaks four million eggs per day and yet each egg is broken individually, the content of each egg is inspected, by a human being who looks at and smells each egg to determine its wholesomeness and fitness for human consumption. If a suspect egg is detected the operator causes that egg to be discarded. It never touches any of the other eggs which are being processed.

The eggs are broken mechanically. They are broken in a fashion which does not allow the egg shell to commingle with the egg interior. This is because the shells of eggs, even eggs which have been washed and sanitized and appear perfectly clean, can carry bacteria and salmonella.

After the eggs are carefully broken and inspected, they are pasteurized, tested for bacterial presence and if necessary repasteurized or destroyed. All of this takes place under the continuous presence and inspection of USDA.

This may sound like a very complicated way to accomplish the seemingly simple task of breaking eggs, but these extensive precautions and the stringent regulations established and enforced by USDA are absolutely necessary to prevent adulterated egg products from entering this nation's food supply. That's why the Egg Products Inspection Act was enacted in 1970.

That is also one of the reasons we are here today. Despite the clear intent of Congress in 1970 that the appropriate Departments of the federal government should establish and enforce regulations sufficient to protect the consumer from the unscrupulous, irresponsible and unsafe processing of eggs, a situation has developed whereby hundreds of bakeries and restaurants across the country are doing just that. I am, of course, referring to the proliferating use of centrifuge egg breaking machines in these and similar establishments.

Following enactment of the Egg Products Inspection Act, USDA established and enforced regulations which prohibit the use of centrifuge egg breaking in official processing plants. Since 1947, when the egg processing inspection program was voluntary, USDA has prohibited centrifuge egg breaking because USDA has determined this practice to be patently unsafe.

A centrifuge may save a chef a little time because instead of breaking eggs one by one, he or she can simply dump dozens of eggs straight from the carton in which they were transported, and then the machine will crush all of them and the liquid will run out of a spout.

Unfortunately, there is simply no way to get an egg shell clean enough to allow it to be safely commingled with the egg interior. There is also no way to guarantee the wholesomeness of every single egg sold to bakeries and restaurants -- even if they were all Grade AA eggs, according to testimony by the U.S. Department of Agriculture before the House Committee on Agriculture in July.

The use of the centrifuge poses a real and immediate threat to public health. As a matter of fact, in my home state there has been an outbreak of salmonella and this machine has been embargoed as a result of this outbreak.

This incident happened in Atlantic City on October 24. After five individuals were hospitalized, the County Health Department was notified. The common food was scrambled eggs or

French toast. The Municipal Health Department was notified and an inspection team was sent to Harrah's Hotel where the incident had occurred. When these inspectors questioned individuals regarding the handling of eggs they were advised they put them in the EggMaster. The EggMaster was inspected and found by the Municipal Health Department to be unsafe because egg shells and dried eggs became embedded around the bottom of the machine. The attached drawing shows where this embedded product was found. This particular machine was embargoed. Following this, the inspectors went to other hotels, and again found them to be faulty, allowing egg shell and dried egg product to gather around the bottom of the machine. Thus, the Municipal Health Department embargoed all EggMaster machines in Atlantic City and will no longer permit their use. It is my understanding that the Municipal Health Department has submitted a report to the Subcommittee which documents this in more detail.

In 1971 when the Egg Products Inspection Act was passed, USDA was given the authority and the responsibility to establish and enforce regulations which would protect the consumer. The USDA accepted this responsibility and used their authority to shut down 700 - 800 egg processing facilities which were violating regulations at that time. Centrifuge egg breaking is still unsafe, and in order to protect public health should be stopped.

The United States Department of Agriculture appeared before the House Committee on Agriculture in July to testify that centrifuge egg breaking is unsafe. At that time the Department testified that it supported legislation which would prohibit the use of centrifuge egg breaking in bakeries and restaurants. In fact, the Department of Agriculture has prohibited the use of centrifuge egg breaking for over 15 years in official egg processing plants.

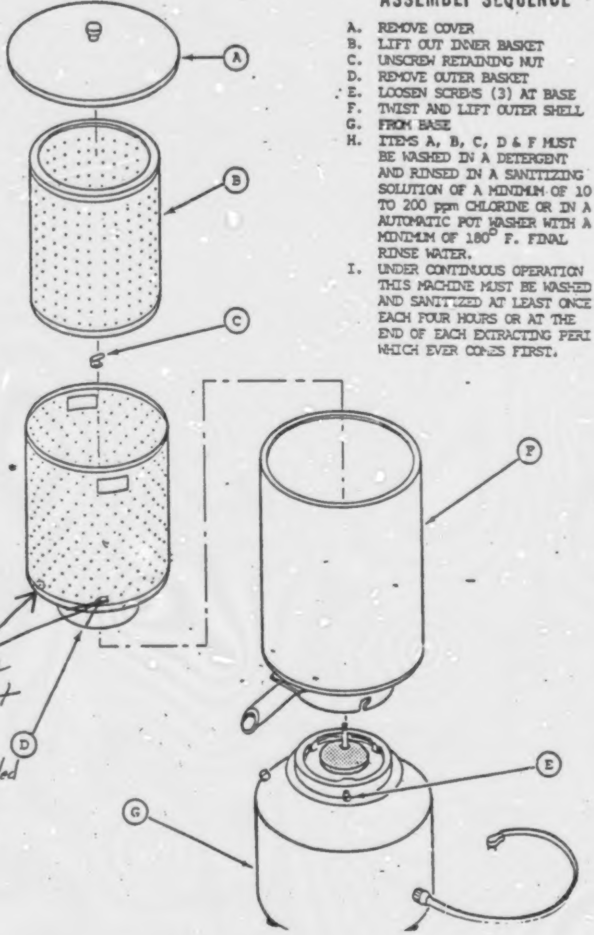
It is now time for the Department of Agriculture to act on the knowledge, experience and convictions which it so clearly holds and exercise the authority necessary to put an end to this unsafe practice.

Thank you.

(Attachment follows:)

REMOVAL AND ASSEMBLY SEQUENCE

A. REMOVE COVER
B. LIFT OUT INNER BASKET
C. UNSCREW RETAINING NUT
D. REMOVE OUTER BASKET
E. LOOSEN SCREWS (3) AT BASE
F. TWIST AND LIFT OUTER SHELL
G. FROM BASE
H. ITEMS A, B, C, D & F MUST BE WASHED IN A DETERGENT AND RINSED IN A SANITIZING SOLUTION OF A MINIMUM OF 10 TO 200 ppm CHLORINE OR IN A AUTOMATIC POT WASHER WITH A MINIMUM OF 180° F. FINAL RINSE WATER.
I. UNDER CONTINUOUS OPERATION THIS MACHINE MUST BE WASHED AND SANITIZED AT LEAST ONCE EACH FOUR HOURS OR AT THE END OF EACH EXTRACTING PERI WHICH EVER COMES FIRST.



4 Screws
& Seal where
dried egg Product
& Egg Shells
become embedded

Mr. Coelho. Matt, I appreciate your testimony very much. I was not aware of this particular outbreak. You say that the State of New Jersey is outlawing the Egg Master? Is that what you're saying?

Mr. Rinaldo. No; the Atlantic County Health Department——

Mr. Coelho. Atlantic County?

Mr. Rinaldo. Yes; the outbreak occurred in Atlantic City. It's the only one I know of. It took place a month ago and——

Mr. Coelho. Well, less than a month ago.

Mr. Rinaldo. Less than a month ago, October 24.

Mr. Coelho. So that in Atlantic County, NJ, you cannot use the Egg Master.

Mr. Rinaldo. Right.

Mr. Coelho. And the problem was discovered in more than one machine?

Mr. Rinaldo. That is correct. It was discovered in every one that was checked by the——

Mr. Coelho. By the health inspectors, right?

Mr. Rinaldo. Right, and they based their conclusion—and I am reading from a report they have—their conclusion, it said:

> Is based on the following two factors: the commingling of egg product and eggshell, and the inability of the machine to be properly cleaned and sanitized under normal operating conditions as evidenced by our inspections.

That's a quote from our report.

Mr. Coelho. Now I think you'll find it intriguing that one of the problems we are having right now is, USDA, we felt, had jurisdiction. They claim—and we will have a witness, and hopefully the witness from USDA is listening to this testimony—they claim that it's FDA's jurisdiction. FDA claims that it's not their jurisdiction, it's USDA's, so we've got the bureaucratic runaround going here, but hopefully as a result of these hearings we will nail it down.

I sincerely appreciate your testimony. I happen to agree with your testimony but, as you know, on the House floor those of us who were concerned about public health were made to look foolish, but maybe this will clarify it a bit and we will hear more testimony.

Jim.

Mr. Jeffords. No questions at this time.

Mr. Coelho. Mr. Volkmer.

Mr. Volkmer. No questions.

Mr. Rinaldo. Thanks again.

Mr. Coelho. Thank you, Matt. We appreciate it very much.

Next would be Mr. Bob Badham.

Bob.

STATEMENT OF HON. ROBERT E. BADHAM, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. Badham. Thank you, Mr. Chairman and members of the subcommittee. I thank you for this opportunity to present my views on the Egg Products Inspection Act or, more specifically, as it is turning out we are doing today, the use of the centrifuge method for breaking eggs by food service establishments such as hotels, bakeries, and restaurants.

The issue of public health can and should be addressed. As a Member representing a district in which the hospitality and tourism industries play such an important role, I am particularly aware of the need to protect the public's health and would never support any machine or procedure which would endanger the public's health. Therefore, I have thoroughly looked into the question concerning the centrifuge egg-breaking machine. I have seen this machine operate and I believe that, when properly used by following the manufacturer's instructions, this machine is not a health hazard, or the health hazard that some claim it is.

Those who are concerned about competition from this machine have said that it is unsafe and constitutes a real and immediate threat to public health. An examination of the operating record of this machine disproves that statement. Throughout the 5 years in which the machine has been used, there have been no cases of illness attributed to any of the 800 machines currently in use.

Now, after the preparation of my testimony for this hearing, all of a sudden we were advised of an outbreak of salmonella in Atlantic City on October 24. I had a dickens of a time getting that report, Mr. Chairman, and I found out it was transmitted to you yesterday, and we finally did get a copy of that report today. The only report that has come to Washington came to your subcommittee, Mr. Chairman, and to no one else.

I would refer to the conclusion of that report, which I think is somewhat interesting:

> In conclusion, it is the opinion of this department that based on the design and construction of the Egg Master/Egg King machine, which is in violation of the New Jersey State Sanitary Code—N.J.A.C. 8:24-5.1 a and b [see enclosure], that its implication as a possible cause in the recent food-borne outbreak [Salmonella enteritidis] at Harrah's Marine Casino cannot be refuted.

Now that is a rather interesting statement which you say it is an "implication" and a "possible cause." I think the conclusion stands on its own. The fact is that it was five employees of Harrah's—not customers but employees—which implies, as I will later point out in my prepared statement, that it's not the machine, it's the handlers and the use that can be a possible cause. Now I would invite the subcommittee's attention to the fact, further, that the same is true of meat grinders, Hobart food mixers, any kind of thing that mixes raw foods and is not properly maintained.

Continuing, this is because the machine was designed for safe operation in a specific market—use by bakeries, hotels, and restaurants. As such, by law—by law—only grade B or above eggs may be used and the liquid obtained from that machine must be used immediately. The manufacturer clearly stipulates that the liquid is to be used only in cooked products. It is this cooking process that works as a pasteurizer of the liquid egg.

Now lest there be any confusion that pasteurizing takes care of sins past as well as sins future, that's just plain not the case. Pasteurization takes care of killing of disease-bearing material prior and up to that point. If it is contaminated, it is taken care of by the pasteurizing process but the minute after it is pasteurized, if exposed to room temperature again or any of the other disease-bearing and causing situations, it can be recontaminated, so that's not the problem.

The manufacturer of this machine works closely with the users to ensure its safe and proper use. He is as concerned as anyone about potential health problems, as his livelihood depends on it. To prohibit the use of this machine would not only be detrimental to a small businessman who has already invested a considerable amount of his own funds to defend against this attack, but the effects of such a restriction would be felt by small bakeries, restaurants, and others who use the machine. They would be forced to pay up to 50 percent more for a lower-quality alternative or to return to the time-consuming, costly, and less sanitary method of hand breaking.

On the subject of hand breaking, the last outbreak of egg-borne salmonella occurred just a couple of months ago. It happened over in Prince Georges County where 70 people, customers of a restaurant, were made ill because of egg food products—scrambled eggs. It was found out that these eggs were hand-broken.

United Egg Producers have complained that a double standard has been created because the egg processing plants are inspected by the USDA and the centrifuge machine is not. It would be ridiculous to regulate the two the same, when the Egg Products Inspection Act saw fit to regulate the two differently. The Congressional Research Service has clearly stated that, under the EPIA, USDA has jurisdiction over the egg processing plants while FDA has sole jurisdiction over restaurants and other similar food establishments.

There are major differences in the environment and purpose of the machine and that of the processing plants which justify the difference in inspection. First is the quality of the product. The Egg King begins with an egg of USDA grade B or above, as compared to dirty, leaking, rotting eggs which can only be used in processing plants, and they are the only ones that can use them. The grade B or better eggs, the only grades USDA authorizes for use in food establishments, have been washed, sanitized, and inspected for rot, leakage, and other contaminants.

Already, under current law, should a restaurant or bakery be found by FDA to use below-grade eggs, then they would be subject to continuing USDA inspection and would be in violation of law. That the law works as presently written is evident by the four cases in which users put substandard eggs in the Egg King. In these cases the egg liquid was immediately impounded by FDA, who notified USDA, who took further action. Such action can include penalties or continuous inspection by USDA.

The second reason for the difference in inspection is that the egg liquid from the machine is used immediately in cooked products. It is not processed for future freezing, drying, or resale in interstate commerce, as is the liquid that comes from the processing plants. The cooking process provides pasteurization to kill any bacteria, and health inspection is conducted by local authorities.

In a processing plant, a tremendous volume of grade C and below eggs are processed for use in many forms throughout the country. Obviously, the localized breaking of eggs and the huge processing operations are more dissimilar than similar, and different inspection requirements as well as different use of technology is to be expected.

A great deal of innuendo, misinformation, and alarm has been circulated about the Egg King, but this issue is one which should be examined carefully and from a scientific basis. The department of health in the State of Hawaii has conducted the only reliable study in which the machine was operated in the actual environment for which it was designed. This study, which examined samplings from three hotel kitchens, found no traces of salmonella. The Hawaii Department of Health concluded that the Egg Master is capable of producing a safe egg product.

USDA conducted their own "scientific" study in which they sent letters to 17 selected members of the scientific and business communities requesting their views on the use of the centrifuge. They responded that the machine was unsafe and not fit for use. However, a later survey of these same respondents, not conducted by USDA, showed that they had never seen the machine, did not know how and under what conditions and restrictions it is used, and had no data or evidence to support their claim that the machine is unsafe.

The most important point I wanted to make today, Mr. Chairman and members of the subcommittee, is that the State and local health agencies have the authority to inspect food establishments. USDA does not. Unless there is clear evidence showing that the State and local governments are not carrying out their responsibilities—which there has not been—Congress should not take legislative action against the use of this equipment, nor, in my opinion, should the USDA take regulatory action as petitioned by the United Egg Producers.

In closing, I believe that the protection of the public's health is essential. There are no studies nor any evidence showing that this machine will contribute to a health problem. The manufacturer has certainly demonstrated his concern and willingness to work to ensure the proper use of the equipment, and there is no indication that State and local agencies are not carrying out their responsibilities. More importantly, the EPIA operates as written to remove the exemption of food service businesses from USDA inspection if grade B or better eggs are not used.

A review of the facts by the committee will make obvious that the egg centrifuge machine is an improvement in terms of health and efficiency; the public health is properly guarded; and, therefore, there are no grounds to restrict the use of this machine. However, a campaign is being waged against the Egg King for economic reasons. I urge the members of the subcommittee to let the market economy decide that issue and not unfairly legislate a small businessman out of business.

If there is a problem that can be demonstrated with this machine or any other, then I suggest that there be a scientific study—not a poll, but a scientific study actually done with scientific methods in the environment which the machine was designed for and should be used in.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Badham follows:]

Testimony of the Honorable Robert E. Badham

Before the Subcommittee on Livestock, Dairy, and Poultry
of the House Agriculture Committee

November 21, 1985

Mr. Chairman and members of the subcommittee:

I thank you for this opportunity to present my views on the Egg Products Inspection Act, or more specifically, the use of the centrifuge method for breaking eggs by food servce establishments such as hotels, bakeries, and restaurants.

The issue of public health should and can be addressed. As a member representing a district in which the hospitality and tourism industries play such an important role, I am particularly aware of the need to protect the public's health and would never support any machine or procedure which could endanger the public's health. Therefore, I have thoroughly looked into the question concerning the centrifuge egg breaking machine. I have seen this machine operate and believe that, when used properly, by following the manufacturer's instructions, this machine is not the health hazard some claim.

Those who are concerned about competition from this machine have said that it is unsafe and constitutes a real and immediate threat to public health. An examination of the operating record of this machine disproves that statement. Throughout the five year's in which the machine has been used, there have been no cases of illness attributed to any of the 800 machines currently in use. This is because it was designed for safe operation in a specific market, i.e., use by bakeries, hotels and restaurants. As such, by law, only grade B or above eggs may be used and the liquid obtained from the machine must be used immediately. The manufacturer clearly stipulates that the liquid is to be used only in cooked products. It is this cooking process that works as a pasteurizer of the egg liquid. Mr. Maynard works closely with the users of the Egg King to insure its safe and proper use. He is as concerned as anyone about potential health problems as his livelihood depends on it.

To prohibit the use of this machine would be detrimental to more than just Mike Maynard, a small businessman who has already invested more than $100,000 of his own money to defend against this unwarranted attack. The effects of such a restriction would also be felt by the small bakeries and restaraunts which currently use the machine. They would be forced to pay more, up to 50 percent more, for a lower quality alternative or to return to the time consuming, costly and less sanitary method of hand breaking.

The United Egg Producers have complained that a double standard has been created because the egg processing plants are inspected by the USDA and the centrifuge machine is not. However, it would be ridiculous to regulate the two (the egg processing plants and food establishments) the same when the Egg

Products Inspection Act saw fit to regulate the two differently. The Congressional Research Service has clearly stated that under the EPIA, USDA has jurisdiction over the egg processing plants, while FDA has sole jurisdication over restaurants and other similar food establishments. There are major differences in the environment and purpose of the machine and that of the processing plants which justify the difference in inspection. First, is the quality of the product. The Egg King begins with an egg of USDA grade B or above as compared to the dirty, leaking and rotting eggs which only the egg processing plants can use. The grade B or better eggs, the only grades USDA authorizes for use in food establishments, have been washed, sanitized and inspected for rotting and leakage. Already, under current law, should a restaraunt or bakery be found by FDA to use below grade eggs they would then be subject to continuous USDA inspection. That the law works as presently written is evident by the four cases in which users put substandard eggs in the Egg King. In these cases, the egg liquid was immediately impounded by the FDA who then notified the USDA to take further action. Such action can include penalties and or continuous inspection by the USDA.

The second reason for the difference in inspection is that the egg liquid from the machine is used immediately in cooked products, it is not processed for future freezing, drying or resale in interstate commerce, as is the liquid that comes from the processing plants. The cooking process provides pasteurization to kill any bacteria and health inspection is conducted by local authorities. In a processing plant, a tremendous volume of grade C and below eggs are processed for use in many forms throughout the country. Obviously, the localized breaking of eggs and the huge processing operations are more dissimilar than similar and different inspection requirements as well as different use of technology is to be expected.

A great deal of innuendo, misinformation and alarm has been circulated about the Egg King. But, this issue is one which should be examined carefully and from a scientific basis. The Department of Health in the State of Hawaii has conducted the only reliable study in which the machine was operated in the actual environment for which the Egg King was intended. This study, which examined samplings from three hotel kitchens, found no traces of salmonella. The Hawaii Department of Health concluded that the Egg Master is capable of producing a safe egg product.

USDA conducted their own "scientific" study in which they sent letters to 17 selected members of the scientific and business communities requesting their views on the use of the centrifuge egg machine. They responded that the machine was unsafe and not fit for use. However, a later survey of these respondents, not conducted by USDA, showed that they had never seen the machine, did not know how and under what conditions and restrictions it is used, and had no data or evidence to support their claims that the machine is unsafe.

A most important point I want to make today is that the state and local health agencies have the authority to inspect food establishments. USDA does not. Unless there is clear evidence showing that the state and local governments are not carrying out their responsibilities, which there has not been, Congress should not take legislative action against the use of this equipment, nor in my opinion, should the USDA take regulatory action as petitioned by the

United Egg Producers.

In closing, I believe the protection of the public's health is essential. There are no studies nor any evidence showing that this machine will contribute toward a health problem. The manufacturer has certainly demonstrated his concern and willingness to work to insure the proper use of the equipment. And, there is no indication that state and local agencies are not carrying out their responsibilities. Most importantly, the EPIA operates as written to remove the exemption of food service businesses from USDA inspection if grade B or above eggs are not used.

A review of the facts by the Committee will make obvious that the egg centrifuge machine is an improvement, both in terms of health and efficiency; the public health is properly guarded and, therefore, there are no grounds to restrict the use of this machine. However, a campaign is being waged against the Egg King for economic reasons. I urge the Members of the Subcommittee to let our market economy decide the issue and to not unfairly legislate a small businessman out of business.

(Attachments follow:)

Congressional Research Service
The Library of Congress

Washington, D.C. 20540

November 20, 1985

TO : Honorable Robert E. Badham
Attention: Melissa McCubbin

FROM : American Law Division

SUBJECT : Enforcement Authority Of The Secretary Of Health And Human Services Over Restaurants And Bakeries Under The Egg Products Inspection Act

Reference is made to your request for a discussion of the enforcement authority of the Secretary of Health and Human Services, over restaurants and bakeries, under the Egg Products Inspection Act (Pub. L. 91-597) (hereinafter referred to as EPIA).

In 1970, when Congress enacted the Egg Products Inspection Act, it vested in the Secretary of Agriculture primary regulatory authority over egg and egg products. The major purpose of the legislation is to assure that the health and welfare of consumers be protected by the implementation of measures authorized under the statute for assuring that eggs and egg products that are distributed to them and used in products consumed by them, are wholesome, otherwise not adulterated, and properly labeled and packaged. 21 U.S.C. § 1031.

Section 5(a) of the EPIA expressly directs the Secretary of Agriculture to cause continuous inspection to be made of the processing of egg products in each plant processing egg products for commerce, in accordance with the regulations promulgated under the EPIA, whenever processing operations are being conducted. Subsection 5(d), however, dictates that restaurants and other establishments and institutions that use eggs which meet the official standards of United States consumer grades for shell eggs will not be considered plants processing egg products and would not be required to operate under the continuous inspection of USDA. Conversely, restaurants which do not use eggs which meet the consumer grade requirements would be subject to continuous inspection by the Agriculture Department.

Subsection 5(d) of the EPIA vests in the Secretary of Health and Human Services exclusive enforcement and inspection authority over restaurants and bakeries which use only consumer grade eggs. However, where such facilities or establishments use nonconsumer grade eggs, they will be subject to the inspection and enforcement authority of the Secretary of Agriculture.

This clarification of the respective inspection and enforcement powers of the Secretary of Agriculture and the Secretary of Health and Human Services, under the EPIA, was cited in the House report which accompanied the final 1970 legislation. In its report,[1] the House Agriculture Committee specifically noted that:

> Egg products processing plants breaking only eggs meeting consumer grades would not be required to have continuous inspection, but would have to meet sanitation requirements established by the Secretary [of Agriculture] with respect to facilities and operating procedures. USDA would determine compliance of these plants on a periodic check basis, and such plants would be subject to applicable local, State, and other federal laws.
>
> Bakeries, other food manufacturers, institutions, and restaurants which process egg products incidental to the preparation of other articles of human food would not be required to have continuous inspection if they use only eggs meeting consumer grades. The Food and Drug Administration would be responsible for enforcement of the law at such establishments. If such establishments elected to break ungraded or poor quality eggs, they would be considered in the same category as egg products processing plants and would have to come under continuous Federal inspection where proper segregation and processing of eggs could be made. (Emphasis added).

The above-cited language of the House report clearly indicates congressional intent to vest in the Secretary of Health and Human Services the authority to conduct inspection and enforcement activities at restaurants and bakeries which use only consumer grade eggs.

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[1] H. Rept. No. 91-1670 (Dec. 3, 1970), p. 3-4. No Senate report and no conference report accompanied the Egg Product Inspection Act of 1970.

We hope that this information will be of some assistance to you.

Cathy Gilmore
Legislative Attorney
American Law Division
November 20, 1985

2/25/85

WPMAIL -DSC -ECHO
MAIL ALL-DOS 'EGG MASTER'

FR: Office of Compliance, HFF-300

SB: Egg Master Machine, MiSa Mfg., Inc., Westminister, California

TO: All Regional Directors
All District Directors

****
THIS MESSAGE IS BEING RESENT AS A CORRECTED COPY
****

We have received a number of complaints from M.E. Maynard, president of MiSa Mfg., and his attorney, Joseph Murphy concerning comments, written and oral, by our field people stating that the Egg Master egg extractor is "banned" and may not be used in food service establishements or other food establishments.

We have no proof that the machine itself contributes ~~we~~ any filth or food additive to the eggs. In fact it is stainless steel and is easily cleanable. While we recognize there is a potential for misuse of the machine by using eggs that may contribute filth to the liquid eggs, such adulteration would be caused by the user and not by the machine.

To ensure that the machine is not only used properly but also to avoid even accidental contamination, the firm is revising its instructions to state: (1) use only USDA sanitized eggs, Grade B or better, (2) visually inspect eggs for dirt or broken shell (caution: if eggs are dirty or cracked, do not use!), (3) use liquid egg mixture only in products to be baked or cooked, and (4) for use in uncooked end products, use pasteurized eggs or hand crack your eggs.

Since we do not have the authority to approve or disapprove Egg Master machine under any of the acts or regulations we administer, we should not be advising either state governments or firms that the machine is either banned or imply that it is banned by saying it is "not approved".

Instances of misuse of the machine should be documented and handled on a case by case basis. We will continue to review any studies that become available and any documented misuses to ascertain whether the actual or potential instances of adulterated eggs attributed to this machine are sufficiently isolated to warrant the issuance of a "Letter of Acceptance" as provided under IOM 312.13.

John M. Taylor

EXHIBIT B

APR 1 1 RE

RGE R. ARIYOSHI
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HAWAII [illegible]

LESLIE S. MATSUBARA
DIRECTOR OF HEALTH

In reply, please refer to:
EPHSD/

April 4, 1985

Mr. Dickey Nitta
Vice President
Rocky Road Products
Waimanalo, HI 96795

Dear Mr. Nitta:

The Department has completed its salmonella study for eggs broken by Egg Master, a centrifugal egg breaking machine.

The eggs sampled came from Rocky Road, Hawaiian Maid, and a "mainland" distributor. Sampling was done in situ at three hotel kitchens.

Samples were drawn as follows:

1. One hundred twenty-four (124) samples of 100 grams each from 41.5 cases of freshly broken eggs using Egg Master machine.
2. Ten (10) samples of 100 grams each from stored refrigerated fluid eggs.
3. Nine (9) samples of broken egg shells.

No salmonella was found in any of the samples.

The Department concludes that the Egg Master is capable of producing a safe egg product. It is stressed, however, that the operator of the device also has a role in the safety and wholesomeness of the egg product. Please continue to inform your Egg Master customers of the operation and maintenance requirement of the machine. We have no objections to its continued use.

Sincerely yours,

EXHIBIT C

Melvin K. Koizumi

MELVIN K. KOIZUMI
Deputy Director for Environmental Health

MKK:lc
cc: Division Chief, EPHSD
Chief, Sanitation Branch

Mr. BADHAM. Mr. Chairman, I also understand that Mr. Dannemeyer was going to be here to testify and is not able, and you have the statement of Congressman Don Ritter, who also asked to testify in behalf of not legislating a machine out of business until there is a scientific test.

Mr. COELHO. Thank you, Mr. Badham. The statement will be made a part of the record, without objection.

[The prepared statement of Mr. Ritter appears at the conclusion of the hearing.]

Mr. COELHO. I would just like to state for the record that, in quoting from this report which I have not totally read, that the paragraph that you quoted "in conclusion," the next paragraph says, "This conclusion is based on the following two factors: the commingling of egg product and eggshell, and the inability of this machine to be properly cleaned and sanitized under normal operating conditions as evidenced by our inspectors." I just want to make sure that we include that in the record. I don't know what the bottom line is out of this report, but I think in fairness the first paragraph of their conclusion needs to have the second paragraph to be complete.

Mr. BADHAM. Well, if I may respond, Mr. Chairman, I was adding the first paragraph because the second paragraph had already been entered into testimony, so I think now you have made twice on the second and I have made once on the first.

If it should be determined, as this conclusion suggests, "the inability of this machine to be properly cleaned and sanitized under normal operating conditions," then I would think definitely there would be a problem. If that is an issue, that issue should be explored. The FDA's memo, the exhibit B attachment to my prepared statement——

Mr. COELHO. Bob, would you support a request to have this thing studied? I mean, I haven't seen the material from Atlantic County. I would like to get that first but, I mean, would you support going into this to check and see——

Mr. BADHAM. Oh, absolutely. I would support a scientific study made by independent scientists, using scientific methods. I have said that in my testimony on the floor in the last instance that the amendment was up for discussion and I have maintained that all along. I think the protection of the public health is paramount, but I think that progress in technology dictates that we don't throw out a technology or an idea or an element of progress and efficiency before it is scientifically tested.

Mr. COELHO. I agree with you. You said, though, earlier that you didn't think that USDA or FDA should get in the middle of this, that we should leave it up to local jurisdictions, they have the authority. In this particular case—not knowing the facts, and I don't know everything that they have done—but based on Matt's testimony, he has said that a local jurisdiction has ruled that this machine not only caused the problem but is not cleanable, based on their conclusion. I mean, there is a local jurisdiction taking a rather strong position. I don't know if they are correct or not but it's a rather strong position. Are you in effect disagreeing with a local jurisdiction, or is that proper? What is your reaction to that?

Mr. Badham. Well, they have made a contention that, one, it is an implication; that, two, the machine is a possible cause for two reasons. One is commingling and the other is the inability of the machine to be cleaned. That is implication; that is allegation, and that is certainly not proof.

Mr. Coelho. But it's a local jurisdiction, though, and my point is——

Mr. Badham. And it's a local jurisdiction, and my response to that would be, "Sure. That's OK. Fine. That is between the user, the owner, the manufacturer, and the local jurisdiction." Not my bag. Not Congress' bag, either. I can tell you that the University of Nebraska food services are still using the machine as of Friday. The State of Hawaii allows the use of the machine. That's fine. Those are local jurisdiction arguments. If the USDA or if the FDA were to get into the thicket, to either ban it or allow it or study it, that's OK, too, but local jurisdictions do have jurisdiction.

Mr. Coelho. OK. I appreciate it.

Any questions from any member of the—Harold?

Mr. Volkmer. Yes; Bob, one question has bothered me during this discussion, and that is, egg processing plants clearly are not allowed to use this type of equipment. Is that correct?

Mr. Badham. I beg your pardon?

Mr. Volkmer. Egg processing plants that process eggs for purposes of either powdered eggs or frozen eggs for sale can't use this type of equipment. Is that correct?

Mr. Badham. In some regulations of the USDA for the plants, they recommend that to preclude the admission of any eggshells into the liquid, that the egg liquid be run through some kind of filter and/or centrifuge to get the eggshells out——

Mr. Volkmer. Well, as I understand the——

Mr. Badham. But no, they cannot use that as a process for two reasons. One, the law and the rules were made at such a time before this machine was in common use, and it was never applied for. Two, the egg processing plants, Congressman Volkmer, the egg processing plants use grade C and below eggs and they don't cook the material immediately.

Mr. Volkmer. All right. They pasteurize it, as I understand it. I don't know. We'll wait and see what other testimony——

Mr. Badham. Yes, they pasteurize it. They have to pasteurize it, and that takes care of all, as I said, the past sins. That kills all the bacteria that's in there. Now if there were no bacteria in there, they wouldn't pasteurize it.

Mr. Volkmer. Well, we do recognize the fact, when we look at the health consequences, that eggshells themselves contain salmonella in all probability.

Mr. Badham. That is not a correct, absolute statement, sir.

Mr. Volkmer. Then the eggshells themselves do not contain salmonella?

Mr. Badham. That's correct.

Mr. Volkmer. Well, I think we should have some studies done on that. My understanding and my review of the information that I have is that that is usually where the salmonella comes from, where you have contaminated eggs.

Mr. **Badham**. Salmonella, Mr. Volkmer—and we could probably get in a scientific discussion, and probably both end up with egg on our faces—but I will say that eggshell is a vehicle that can harbor salmonella virus, bacteria.

Mr. **Volkmer**. All right.

Mr. **Badham**. It does not, in and of itself, have it in it or on it. Before an egg is sanitized it has membranes that don't allow for it but, anyway, once cooked or pasteurized, that kills salmonella anyway. Even a cooked food, if not kept at a high temperature and left to sit around, can harbor salmonella no matter where the egg material came from.

Mr. **Volkmer**. Well, some of the things that, again, bother me about the use of this machine is the other part, and is included in your statement. Basically you appear to emphasize that it's the cooking process later that is going to kill the salmonella that is in there anyway, so really don't worry about having salmonella in the mixture. That really bothers me, because if you don't cook it at the proper temperatures you are not going to kill the bacteria.

I can fix scrambled eggs at a pretty low temperature. I can fix French toast at low temperature. In deference to what happened in New Jersey, I don't know for sure—I haven't seen the investigation report, exactly everything in there—but if those people had eaten scrambled eggs or French toast, and then they got sick after eating that and hadn't eaten anything else, surely you would agree that that was in all probability what caused the illness, would you not?

Mr. **Badham**. Well, no. Assuming that the machine was dirty and/or improperly maintained, cleaned, and operated, there is a distinct possibility that the salmonella infection could have come from the material from the machine. That statistically, however, is belied or denied by the fact that over 800 of these machines are in use currently and, up until this strange one on October 24, just after the floor hearing and between that and this hearing, all of a sudden five cases come up at a casino.

It is not only a little strange, but I think the fact remains that these were not customers, they were employees, which implies that they were in the kitchen. As the case over in Maryland when 70 customers got sick, they attributed that to hand-breaking and dirty hands by the food handlers, so if these were food handlers over there at Harrah's, then the problem is not even with the machine, even if it was dirty; it's with the cleanliness of the food handlers.

Mr. **Volkmer**. I will wait until I see a complete copy of that investigation before I make a decision. Thank you very much.

Mr. **Badham**. Sure.

Mr. **Coelho**. I just want to state for the record, Bob, that surely you don't think that the enemies of this machine would condone hospitalizing people with poisoning in order to make their case. You seem to imply that. That's a rather strange accusation.

Mr. **Badham**. No. I just said the timing was somewhat a weird coincidence.

[Additional material submitted by Mr. Badham appears at the conclusion of the hearing.]

Mr. **Coelho**. But people are hospitalized.

Mr. **Badham**. Yes, I know they were.

Mr. **Coelho**. Timing can be good or bad, depending on your point of view.

Mr. **Badham**. Well, I certainly hope I would never leave you, Mr. Chairman, or any member of the committee with that implication, because I certainly didn't make that implication or at least didn't intend to make that implication.

Mr. **Coelho**. OK. Thank you.

Any other questions?

[No response.]

Mr. **Coelho**. Thank you. Thank you, Bob, for testifying.

The next witness will be our colleague from Nevada, Mr. Reid. Harry, you may proceed.

STATEMENT OF HON. HARRY M. REID, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEVADA

Mr. **Reid**. Thank you, Mr. Chairman. I, of course, appreciate the opportunity to appear before you today.

Prior to September of this year I hadn't heard of a machine of this nature, or the Egg King machine or the Egg Master machine, but a "Dear Colleague" letter from the gentleman from California, Mr. Badham, brought to my attention an amendment to the farm bill he intended to introduce regarding these egg-breaking machines. A week later a "Dear Colleague" letter arrived from the gentleman from Georgia, Mr. Thomas, taking issue with certain information being offered regarding the amendment. I knew at that time this was going to be a controversial vote.

It was also at that time that it was brought to my attention that 20 major hotels in my home State of Nevada were using the Egg Master machine and wanted to continue to do so. I, therefore, appear before you today in support of the Egg Master machine as it is used by hotels, restaurants, and bakeries across this country.

These machines have been used in some Nevada hotels for over 3 years. The owners and operators say that these machines are efficient, time-saving, labor-saving, economical devices. They are dependable and, above all, they believe they are safe. As you know, Mr. Chairman, millions of visitors come to Nevada each year. Thousands of eggs are broken with these machines daily and used in food served to these visitors. There has never been a case of salmonellosis in all the years they have been used.

The testimony given by Congressman Rinaldo indicates that some problems have developed. This, of course, at this time is in dispute. I have been advised that there are some 700 to 800 machines in existence in this country, breaking about 3 million eggs a day. The machines have broken 1 billion eggs in the past 4½ years. This figure should be sufficient evidence of their safety.

The law does not allow the use of eggs commercially unless they are grade B or better. In Nevada most of the hotels and restaurants, however, use grade A eggs. If the machine is used and cleaned as directed, and the egg liquid is then cooked and baked as directed, salmonella will not exist. These are problems that must be resolved by proper training and management.

Mr. Chairman, I believe it is a matter that should be handled by the public health authorities of local and State governments. It is their job to inspect health conditions of commercial establishments, including facilities, equipment, and even personnel. It is the enforcement of the laws that are necessary in this regard. This is an area where State and local control is being emphasized. This is an era—I'm sorry, Mr. Chairman—where State and local control of government is being emphasized. Surely this is not an area where the Federal Government should have any involvement.

I support the procedures used in New Jersey, as testified by Congressman Rinaldo. I think that that's a function of State and local government to inspect equipment like this or any other equipment, to determine if in fact it is safe and clean and being used properly.

If, as Congressman Rinaldo has stated, the disputed area of these machines, it is determined that they can't be maintained properly, then I think that the State of New Jersey should never let another one come into the State of New Jersey and I think, of course, in that Harrah's is a company that originally started in Nevada, I don't think they will be using them in Nevada either. I don't think this is an area where Congress should be passing laws to prevent the use of these machines.

The hotel and casino business—as you know, Mr. Chairman and members of the committee—is the lifeline of Nevada's economy. We believe that Nevada provides the best entertainment, recreation, and gaming facilities in the world. Part of these services is to provide the food to the millions of people who come to these facilities. We are anxious to provide the best available. Fresh, clean food is a must. Fresh, clean eggs are part of these provisions, and that's one of the things that people like to serve, are these eggs that are fresh.

In closing, let me state that I think the State of Nevada should regulate its own. This is not the business of the Congress.

[The prepared statement of Mr. Reid follows:]

PREPARED STATEMENT OF HON. HARRY M. REID, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEVADA

Mr. Chairman and Members of the Subcommittee, I appreciate this opportunity to appear before you to express my views regarding the use of the centrifuge method of egg breaking.

First, I would like to say that prior to September of this year I had not heard of the centrifuge method of egg breaking, or the Egg King Machine or the Egg Master Machine. A "Dear Colleague" letter from the gentleman from California, Mr. Badham brought to my attention an amendment to the Farm Bill he intended to introduce regarding the egg breaking machine. A week later a "Dear Colleague" letter from the gentleman from Georgia, Mr. Thomas arrived, taking issue with certain information being offered regarding the amendment. I knew then a controversial vote was brewing.

It was also at this time that it was brought to my attention that 20 major hotel and casinos in my home State of Nevada were using the Egg Master Machine and wanted to continue to do so.

I appear before you today in support of the Egg Master Machine as it is used by the hotels, restaurants and bakeries across the country.

These machines have been used in some Nevada hotels for over 3 years. They are efficient, time saving, labor saving, economical devices. They are dependable and above all, they are safe. Millions of visitors come to Nevada annually. Thousands of eggs are broken with these machines daily and used in food served to these visitors. There has never been a case of salmonellosis in all the years they have been used.

I have been advised there are 700 machines in existence in this country, breaking 3 million eggs daily. The machines have broken 1 billion eggs in the last 4 1/2 years. This figure should be sufficient evidence of their safety in that not one case of salmonellosis can be attributed to the machines.

The law does not allow the use of eggs commercially unless they are B grade or better. In Nevada most of the hotels and restaurants use A grade eggs. If the machine is used and cleaned as directed, and the egg liquid is then cooked or baked as directed, salmonella will not exist. These are problems that must be resolved by proper training and management. It is a matter that should be handled by public health authorities of local and state government. It is their job to inspect health conditions of commercial establishments including facilities, equipment and personnel. It is the enforcement of the laws that is necessary. This is an area where state and local control is being emphasized. Surely, this is not an area where the federal government should have any involvement.

The hotel and casino business is the lifeline of Nevada's economy. We provide the best entertainment, recreation, and gaming facilities in the world. Part of these services is to provide the food to these millions of people. We are anxious to provide the best available -- fresh, clean food is a must. Fresh clean eggs are part of these provisions. Let the State of Nevada regulate its own. This is not the business of the Congress.

Thank you.

Mr. Coelho. Thank you, Harry.

Any questions?

[No response.]

Mr. Coelho. Thank you, Harry, for testifying.

Mr. Reid. Could I be excused, Mr. Chairman?

Mr. Coelho. Sure.

Our next witness will be Doug Bereuter from Nebraska. Doug, you may proceed.

STATEMENT OF HON. DOUG BEREUTER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEBRASKA

Mr. Bereuter. Thank you, Mr. Chairman.

I come before this subcommittee today not as an expert in the field of egg processing. Instead, I wish to rely on the expertise of others who are knowledgeable on the subject of egg processing and to correct some of the misinformation which is currently being circulated about the safety of the centrifugal crushing of eggs. Incidentally, this is not new technology; it is not an effort to stop new technology. This process was patented on May 30, 1893, and I will give this exhibit to the subcommittee.

Mr. Coelho. Without objection, it will be included with your prepared statement.

Mr. Bereuter. The issue which the centrifuge egg crusher presents to us today is whether or not a potential health hazard is created by permitting the continued use of this machine to crush eggs for human consumption. The Egg Products Inspection Act of 1970 addressed this problem by prohibiting commercial egg processing plants from using the centrifuge as an egg breaker. This prohibition was enacted because of the health hazards that would be created by the commercial crushing of eggs in this manner.

The irony of the situation is that through legislation and regulation we have outlawed the use of this process where we have Federal inspection to ensure the safety of our citizens, yet we permit its use where there is no inspection or assurance of cleanliness in the processing of foods. Proponents of the centrifuge argue that this machine is a technologically safe and an efficient means of providing a fresher egg product for consumers. With the capacity of breaking several hundred eggs per minute, there is no question that the centrifuge is an efficient and economical way to break eggs. However, efficiency and economy do not necessarily equate with safety.

The potential for salmonella poisoning arises from two sources. One involves the manner in which the machine is used; the other arises from the centrifuge process itself. Under the first, we are to place complete faith on the assumption that the user of the machine will abide by and comply with all the instructions for proper use and handling of the centrifuge egg separator.

Instructions for the Egg King/Egg Master machine instructs the user to use only grade B eggs or better, visually inspect the eggs for dirt and broken shells, to cook or bake the egg mixture for at least 3½ minutes at temperatures of at least 140 °F or higher, refrigerate the liquid egg product, and to clean the machine at the end of each cracking period. While these directions are commendable, we are not, I hope, so naive to believe that all kitchen employees abide by the same uniform standards of cleanliness or are so honest as to only use top-quality eggs.

Now for a little bit of inspection information. Random onsite inspections last year by the USDA and the FDA of bakeries in southern California using the centrifuge machine illustrates how easily these instructions can be totally disregarded. Of the four bakeries inspected, none completely followed the operating directions for the machine and three were found in violation of the Egg Products Inspection Act. Two bakeries failed to meet U.S. grade B standards for egg products. A third bakery had 18 containers of frozen eggs that were supposedly broken a couple of days earlier and frozen in plastic buckets. A fourth bakery had several dozen cases of eggs that did not comply with U.S. grade B requirements.

Observation of the eggs which were being used in the bakeries by the inspectors showed that exterior shells had adhering manure, yolk, fiber from the filler flats, and other unidentifiable foreign material. In some cases the leaking and smashed eggs had caused other eggs to become stuck in their fiber cell. I could proceed to describe in greater detail what the USDA found during its inspection, but because many of us have only recently finished our breakfast, I will instead ask that this report be made a part of the record.

The second issue I wish to discuss is the soundness of using a centrifuge to break and separate eggs. Even if we are confident that all users of the Egg Master follow its instructions to the letter, there still exists the danger of salmonella poisoning because bacteria persist in the porous shell of the egg. In the centrifuge process the eggshell is broken into very small pieces and commingles with the egg before separation.

If Mr. Volkmer were here, I think that the next part of my testimony would answer part of his question. Research by the University of Nebraska shows that the level of coliform present in egg matter is much higher if it is processed in a centrifuge machine. Even though eggs are washed, there is a certain amount of fecal matter that will adhere to the pores of the eggshell. Centrifuging breaks the shell down, causing the release of that bacteria. Preliminary experimental evidence indicates a much higher level of coliform bacteria in eggs that are processed through centrifuge machines than when they are broken by other approved methods. You will have one of my constituents, assistant Prof. Michael Liewen, testifying today on results of information that I believe will meet the definition of scientific testing.

Incidentally, speaking of the University of Nebraska, despite our best efforts we can find no one in the food processing service that will admit to using the centrifuge machine. In fact, the director specifically denies that it is used in the university. If it is used, it is probably used for testing on the east campus, as indicated by part of the testimony that will be presented to you later today.

I believe that all of this will be made a part of the record, so I am going to skip over a couple of things and go to the Atlantic City case.

Some have stated that the use of this machine is a disaster waiting to happen, and indeed I believe that is the case. Yesterday I received a copy of a memorandum from the city of Atlantic City which you apparently have received for the record. Indeed, it is addressed to this committee, independently, I might say, of the gentleman from New Jersey who has already given testimony. The memorandum outlines the investigation by the Atlantic City Health Department, its findings, and the reasons for embargo of the use of the extractor.

Several parts of that memorandum have been read, in one case twice, but I think in looking at the machine itself an additional and the final relevant part of that memorandum should be read now orally so that other witnesses coming up subsequently will have a chance to react to whether or not this machine is inherently defective because of the difficulty of cleaning it.

I quote:

> Subsequently a survey was conducted to determine the sanitary conditions of the Egg Master machines throughout the city due to our concern that the Egg Master machine is not easily cleanable and because of the high volume of people eating in casino hotels. All eggshells cannot be sanitized and when egg liquid mixes with eggshells, the egg liquid becomes contaminated. It is not uncommon for a major food outlet in a casino to serve over 20,000 meals per day. The embargoed devices located in casino hotels were observed to be in the following condition

And these five elements are identified as to why the machine is inherently impossible to clean under normal conditions where it is extensively used.

> One, the silicon seam located on the outer perforated basket of some recent models accumulates excessive amounts of eggshell. Silicon is not an acceptable food contact surface.
>
> Two, spout food contact surfaces excessively encrusted with egg product. Note: This spout is not detachable and is not easily cleanable.
>
> Three, the lower section of the outer perforated basket at cylinder base juncture is indented, allowing for egg wastes to collect.
>
> Four, the rim on inner perforated basket is soiled with dried egg product. The rim is not smooth and easily cleanable.

And, finally;

> Five, screws attaching outer perforated basket to bottom of cast aluminum base are a food contact surface. Screws are not acceptable food contact surfaces.

Again, to repeat the conclusion, the conclusion that "in the opinion, of the department * * * the design and construction of the Egg Master/Egg King machine * * * violation of New Jersey statute," citation given, "that its implication as a possible cause in the recent food-borne outbreak at Harrah's Marina Casino cannot be refuted. This conclusion is based on the following two factors: the commingling of egg product and eggshell, and the inability of this machine to be properly cleaned and sanitized under normal operating conditions as evidenced by our inspections."

I would implore you that if future salmonella outbreaks occur that are attributable to the use of the centrifuge egg separator, the credibility of all egg processors and producers will be placed in serious jeopardy. The potential for even more serious disasters or problems is certainly demonstrated by what has happened in Atlantic City.

Last year over three-quarters of a billion eggs were processed in my State alone. The potential risk which this poses for all egg producers and consumers cannot be measured in either financial or human costs. We can, however, avoid the problem at a very minimal cost to both the public and producer by prohibiting the use of this machine.

The data we have seen reflects a disregard for normal sanitation procedures in the use of the equipment, by the inherent characteristics of the equipment. Because of this, I would urge the prohibition of this equipment until adequate sanitary procedures can be developed that will assure egg products that are completely free of microorganisms that cause damage to human health. In short, the centrifuge users should follow the same sanitation procedures used by regular egg-breaking plants supervised by the USDA, if they can develop equipment to do that. The machine itself is not designed for proper cleaning.

Again, I want to thank the members of the subcommittee for their time, and of course I would be happy to answer any questions that you might have but I encourage you to listen in detail to some of the experts that are forthcoming this afternoon, and I'm sure you will.

[The prepared statement of Mr. Bereuter follows:]

STATEMENT BY REPRESENTATIVE DOUG BEREUTER
BEFORE THE HOUSE AGRICULTURE
LIVESTOCK, DAIRY AND POULTRY SUBCOMMITTEE
NOVEMBER 21, 1985

Mr. Chairman, members of the Subcommittee, good morning. I wish to thank the Chairman of the Subcommittee for the opportunity to testify at this hearing today.

This year has been a busy one for all of us who have agricultural interests in our districts. This is, I believe, the fifth time that I have appeared before the House Agriculture Committee in the past month. It has always been a pleasure to work with the members of the Agriculture Committee on matters of mutual interest, and I appreciate their indulgence in allowing me to be a part of their diliberations.

I come before this subcommittee today not as an expert in the field of egg processing. Instead, I wish to rely on the expertise of others who are knowledgable on the subject of egg processing and to correct some of the misinformation which is currently being circulated about the safety of the centrifugal crushing of eggs.

The issue which the centrifuge egg crusher presents to us is whether or not a potential health hazard is created by permitting the continued use of this machine to crush eggs for human consumption.

The Egg Products Inspection Act of 1970 addressed this problem by prohibiting commercial egg processing plants from using the centrifuge as an egg breaker. This prohibition was enacted because of the health hazards that would be created by the commercial crushing of eggs in this manner. Now, however, we face the same threat if we permit restaurants, bakeries, and other food processors to circumvent the Egg Products Inspection Act by using these egg crushers in their establishments.

The irony of the situation is that through legislation and regulation, we have outlawed the use of this process where we have federal inspection to insure the safety of our citizens, yet permit its use where there is no inspection or assurance of cleanliness in the processing of food.

Proponents of the centrifuge argue that this machine is a technologically safe and efficient means of providing a fresher egg product for consumers. With the capacity of breaking several hundred eggs per minute there is no question that the centrifuge is an efficient and economical way to break eggs. However, efficiency and economy do not necessarily equate with safety.

The potential for Salmonella poisoning arises from two sources: One involves the mannner in which the machine is used; the other arises from the centrifuge process itself.

Under the first, we are to place complete faith on the assumption that the user of the machine will abide by and comply with all the instructions for the proper use and handling of the centrifuge egg separator. The instructions for the Egg King/Eggmaster machine directs the user to use only grade B eggs or better, visually inspect eggs for dirt and broken shells, to cook or bake the egg mixutre for at least 3.5 minutes at temperatures of at least 140 degrees or higher, refrigerate the liquid egg product, and to clean the machine at the end of each cracking period.

While these directions are commendable, we are not so naive to believe that all kitchen employees abide by the same uniform standards of cleanliness, or are so honest as to only use top quality eggs.

Random on-site inspections last year by the USDA and the FDA of bakeries using the centrifuge machine illustrate how easily these instructions can be totally disregarded. Of the four bakeries inspected, none completely followed the operating directions for the machine, and three were found in violation of the Egg Product Inspection Act. Two bakeries failed to meet U.S. Grade B standards for egg quality. A third bakery had 18 containers of frozen eggs that were supposedly broken a couple days earleir and frozen in plastic buckets. A fourth bakery had several dozen cases of eggs that did not comply with U.S Grade B requirements.

Observations of the eggs which were being used in the bakeries by the inspectors showed that exterior shells had adhering manure, yolk, fiber from the filler flats, and other unidentifable foreign material. In some cases the leaking and smashed eggs had caused other eggs to become stuck in their fiber cell.

I could proceed to describe in greater detail what the USDA found during its inspections, but because many of us have only recently finished our breakfasts I instead ask that this report be made a part of the record.

The second issue I wish to discuss is the soundness of using a centrifuge to break and separate eggs. Even if we were confident that all users of the Eggmaster followed its instructions to the letter, there still exists the danger of Salmonella poisoning because bacteria persists in the porous shell of the egg. In the centrifuge process, the eggshell is broken into very small pieces and commingles with the egg before separation.

Research by the University of Nebraska shows that the level of coliform present in egg matter is much higher if it is processed in a centrifuge machine. Even though eggs are washed, there is a certain amount of fecal matter that will adhere to the pores of the eggshell. Centrifuging breaks the shell down, causing the release of the bacteria. Preliminary experimental evidence indicates a much higher level of coliform bacteria in eggs that are processed through the centrifuge machine than when they are broken by other approved methods.

Although there is no definite evidence that the egg has acted as the vehicle for transmitting any of these species to man, contamination of the eggshell with infected feces may easily occur and be followed by penetration of the bacteria into the egg contents. Regardless of how well the shell may be cleaned, there is evidence to show that some Salmonella group bacteria are transmitted via the interior content of the egg. The use then of a centrifuge egg processor only increases the level of bacteria present in the egg mixutre and the risk of potential harm from food poisoning.

We must also keep in mind that USDA regulations contain certain quality variances. In Grade AA eggs for instance, it is still permissible to have up to 9% checked eggs. These "checked" or imperfect eggs may be infected with bacteria that is dangerous to human health. Thus, even use of Grade B or better eggs will not necessarily insure the health safety of the public.

Finally, we should also note that Salmonella group of bacteria contains over 100 species of Salmonellae which closely resemble each other. While they are all distinctly dangerous organisms, the list of Salmonellae responsible for serious and often fatal infections is continually growing. Salmonella are particularly insidious because their presence in food is usually undetectable.

Some have stated that the use of this machine is a disaster waiting to happen. Indeed, that disaster has already happened. Yesterday, I received a copy of a memorandum from the City of Atlantic City, New Jersey detailing an outbreak of Salmonella poisoning at a local hotel-casino. The source of that contamination was determined to be an Egg Master extractor. The memorandum outlines the investigation by the Atlantic City Health Department, its findings and the reasons for the embargo of the use of the extractor. (See Attachment #1)

The conclusion of the city's investigation was that the cause of the Salmonella case was attributable to the Egg Master/Egg King extractor, and to quote the report, ". . .the commingling of egg product and egg shell, and the inability of this machine to be properly cleaned and sanitized under normal operating conditions. . ."

I would implore you that if future Salmonella outbreaks occur that are attributable to the use of the centrifuge egg separator, the credibility of all egg producers and food processors will be placed in serious jeopardy. The potential for even more seriousness disasters could make the Atlantic City case pale in comparison.

Last year, over three-quarter of a billion eggs were produced in the State of Nebraska. The potential risk which this poses for all egg producers and consumers can not be measured in either financial or human costs. We can, however, avoid the problem at a very minimal cost to both the public and the producer by prohibiting the use of this machine.

The data we have seen reflects a total disregard for normal sanitation procedures in the use of this equipment. Because of this, I would urge the prohibition of this equipment until adequate sanitation procedures can be developed that will assure egg products that are completely free of microorganisms that cause damage to human health. In short, the centrifuge users should follow the same sanitation procedures used by regular egg breaking plants supervised by the USDA.

To do anything less will only make a mockery of the Egg Products Inspection Act and continue to expose consumers to a very serious health hazard in the future.

Again, I thank the members of the Subcommittee for their time and I would be happy to answer any questions which you may have.

United States
Department of
Agriculture

Agricultural
Marketing
Service

ATTACHMENT #1

POULTRY DIVISION, GRADING BRANCH
MODESTO REGION

May 9, 1984

TO : Donald A. Niebuhr, Chief
Poultry Division, Grading Branch, Washington, DC

FROM : Sam Traylor, Regional Director
Poultry Division, Grading Branch, Modesto, CA

SUBJECT: Centrifuge Egg Breaking - Bakeries

We have recently had several protests regarding egg breaking machines being used in bakeries and restaurants. Reports are that the machines are also being sold to hospitals, hotels, central kitchens, and other volume users of eggs and egg products. The complaints are from owners and operators of USDA inspected egg products plants.

Industry members who contacted us point out the stringent requirements they must meet and insist that the use of the subject machine makes a mockery of the Egg Products Inspection Act. They are required to wash and sanitize eggs immediately prior to machine breaking. After breaking, the shells must be kept separately from the egg meat. A qualified operator must then physically inspect each broken-out egg and remove any dirt, blood, rots, etc. They must use only clean, wholesome raw materials, and further undergo product pasteurization to destroy any harmful microorganisms. They argue that use of these machines will eventually cause someone to get sick and will have a bad reflection on the entire egg products industry.

Based on these allegations, we visited four Los Angeles bakeries using centrifuge egg breaking on May 1 and 2, 1984. Three of the firms were in violation of the Egg Products Inspection Act. Attachment #1 will show the names and addresses of the bakeries and egg suppliers.

The specific violations for bakeries #1 and #2 were failure to meet U.S. Grade B standards for egg quality. The cause was primarily dirty eggs and leaker loss. One sample at bakery #2 had a mixed rot egg that was leaking and had a putrid odor. Bakery #3 had 18 containers of frozen eggs that were supposedly broken a couple of days earlier, placed in plastic buckets and frozen. Bakery #4 had 32/15 dozen cases of shell eggs that did comply with U.S. Grade B requirements.

Shell eggs at bakeries #1 and #2 were officially retained and shipped back to the plants of origin. State officials were notified and will inspect the eggs after they are reworked and retrieve the USDA retain tags. We prepared and issued Egg Products Inspection Act violations (PY-518-1) to both bakeries and the shell egg suppliers.

The 18 containers of frozen product were placed under USDA retention. An Egg Products Inspection Act violation was written and issued to bakery #3. We understand the firm is making arrangements to voluntarily destroy the product. We have agreed to monitor the destruction.

General Observations:

Our review showed the exterior shells did have adhering manure, yolk, fiber from the filler flats and other unidentifiable foreign material. In some cases the leaking and smashed eggs had caused other eggs to become stuck in their fiber cell. This is a particularly bad situation, because when the flats are inverted, the eggs do not readily fall from the filler flat. The operator must bang the flat against the wall of the hopper in order to dislodge or break the egg. Any debris that hasn't already fallen into the hopper will certainly go during the banging process.

Equally disturbing and something I had not thought about is the moisture that forms on the shells. When eggs are removed from the cooler to a warm or even hot room (as in bakeries) the shells will quickly become covered with condensation. If the eggs are moved in and out of the cooler, the saturated eggs and moist filler flats become prime candidates for rapid mold growth. In any case, whatever is on the exterior of the shell will be included in the final product.

The mixed rot with the putrid odor certainly would have gone into the machine without being detected by an operator. The egg showed no outward signs of being inedible. However, when placed before the candling light the rot was obvious. The egg was a slight leaker, but the odor could not be detected until the egg was within five or six inches of the nose. At that point a pronounced putrid smell was evident.

Comments from some of the bakery managers were as follows:

- We do get some "smelly eggs" occasionally, but everything goes into the machine.

- We have had some cases where filler flats appeared to have been chewed by rats or mice.

- My people are not egg inspectors---they are going to dump everything into the hopper.

The centrifuge machines we saw at all four bakeries were Egg Master, MiSa Manufacturing, Inc., 7766 Westminister Avenue, Westminister, CA 92683. It is interesting to note that the company literature (attachment #2) states, "USDA graded and sanitized eggs" must be used. One machine even had a metal tag attached to the housing that gave the same message.

The letter from the California Department of Health Services that sanctions the Egg Master (attachment #3) states:

> "As a result of this evaluation, we are recommending to California Local Health Departments that the egg master EGG extractor (Model No. 81081-982) be accepted in California Food Establishments for cracking, extracting, and blending of USDA GRADED EGGS."

I realize that manufacturers' recommendations carry very little weight. Also, I have no idea what real authority or enforcement power is behind the California Department of Health Services' approval letter. What I do know is that, of the four bakeries, none were using USDA graded eggs.

I hesitated to even mention the criteria requiring USDA graded eggs. Notice neither the brochure nor the state letter mentions what USDA grade. Further and regardless of grade, the inverting of filler flats over the hopper, the occasional dirty egg, and the inability to view the interior of each broken-out egg would still allow for contamination and/or unwholesome conditions. My reason for including the company brochure and state letter is to point out that both requirements were being totally disregarded.

What is important is the concept of commingling egg meat with crushed shells that may contain fecal matter, feathers, dust, and other contaminants. The standard of shell eggs meeting U.S. Grade B requirements is grossly misleading in this instance. True, eggs meeting Grade B can be sold direct to consumers. But surely when the Egg Products Inspection Act was passed, the intent was for the consumer to have the option of removing the few eggs with manure, blood spots, rots, etc. Our review clearly showed this option will not be available when using the centrifuge method.

Participating in the two-day review from Poultry Grading were myself, John Osborn, Regulatory Officer, and Chuck Johnson, Assistant Federal-State Supervisor. We were accompanied to the bakeries by Bill Teachworth, Investigator, FDA.

Sam Traylor

cc:

Bill Teachworth, Investigator
John Harris, Supervisory Investigator
Food and Drug Administration
1521 West Pico Blvd.
Los Angeles, CA 90015

Chambers Bryson, Chief
State of California
Department of Health Services
Food and Drug Branch
14P Room 400
Sacramento, CA 95814

ATTACHMENT #1

BAKERY REVIEW

Bakery #1:

La Mousse
11150 La Grange Avenue
Los Angeles, CA 90025

Findings: 33/15 dozen cases shell eggs labeled Extra Large AA
11.00% checks
3.00% dirties (manure, egg meat, filler flat fiber)
3.67% leaker loss

Retained: 33/15 dozen cases

Supplier: Country Eggs for City Folks
1847 Compton Blvd.
Compton, CA 90221

Bakery #2:

Grace Pastries
324 South Hindry
Inglewood, CA 90301

Findings: 20/30 dozen cases shell eggs labeled Jumbo A
14/15 dozen cases shell eggs labeled Jumbo A
3.25% leaker loss
1.50% dirties (manure, egg meat, filler flat fiber)
.25% inedible (mixed rot)

Retained: 20/30 dozen cases
14/15 dozen cases

Supplier: Hidden Villa Ranch
P. O. Box 1982, File 3100
Placentia, CA 92670

Bakery #3:

Kream Krop
2323 West Manchester Blvd.
Inglewood, CA 90301

Findings: No shell egg inventory
18 plastic containers of frozen egg product
(not identified)

Retained: 18 containers

Supplier: Hidden Villa Ranch
P. O. Box 1982, File 3100
Placentia, CA 92670

Bakery #4:

Cafe Casino
16805 South Central
Carson, CA 90745

Findings: 32/15 dozen cases shell eggs labeled Extra Large AA
Product met U.S. Consumer Grade B requirements

Supplier: Morning Fresh Egg Farms
1331 Sapphire Avenue
Mentone, CA 92359

CITY OF ATLANTIC CITY
Atlantic City • New Jersey • 08401

November 20,1985

TO: SUBCOMMITTEE LIVE STOCK, DAIRY AND POULTRY OF HOUSE COMMITTEE ON AGRICULTURE
TONY COELHO, CHAIRMAN

FROM: ENVIRONMENTAL HEALTH SECTION ATLANTIC CITY DIVISION OF HEALTH-DENISE A. NELSON, CHIEF Denise A Nelson

RE: FOODBORNEILLNESS INVESTIGATION
HARRAH'S MARINA HOTEL AND CASINO

On 10-24-85 the Atlantic County Health Department reported five confirmed cases of Salmonella enteritidis. The five persons are employees of Harrah's Marina Hotel Casino.

The foodborne illness investigation was inititated by the Environmental Health Division the same day (10-24-85). Chapter 12 State Sanitary Code *retail food* establishment inspections were conducted in the following locations: Employees Cafeteria, The Deli, Main Kitchen, Butcher Room and Bakery.

The case studies indicated the suspect *foods* were scrambled eggs and or french toast. Upon questioning the chef on preparation practices of scrambled eggs and french toast it was noted that an egg extractor " The Egg Master" was utilized for breaking eggs. The Egg Master was noted to be in the following condition: "perforated outer stainless steel basket contains dry egg yolks and dry broken shell pieces, these are food contact surfaces, also interior surface where liquid collects and is dispensed contains both shell and egg residues." This machine and egg product were placed under embargo. At this time it was also noted that the Egg Master machine contains screws which accumulate egg residues. (see enclosure). In our opinion the Egg Master machine can not be easily cleaned and santized.

Subsequently a survey was conducted to determine the sanitary conditions of the Egg Master machines throughout the City due to our concern that the Egg Master machine is not easily cleanable and because of the high volume of people eating in casino hotels. All egg shells can not be sanitized and when egg liquid mixes with egg shells the egg liquid becomes contaminated. (It is not uncommon for a major food outlet in a casino to serve over 20,000 meals per day.) The embargoed devices located in casino hotels were observed to be in the following condition:

1.) The silicon seam located on the outer perforated basket (of some recent models) accumulates excessive amounts of egg shells. Silicon is not an acceptable food contact surface.
2.) Spout food contact surfaces excessively encrusted with egg product. Note: This spout is not detachable and is not easily cleanable.
3.) The lower section of the outer perforated basket at cylinder base juncture is indented allowing for egg wastes to collect.
4.) The rim on inner perforated basket is soiled with dried egg product. The rim is not smooth and easily cleanable.
5.) Screws attaching outer perforated basket to bottom of cast aluminum base are a food contact surface. Screws are not acceptable food contact surfaces.

In conclusion, it is the opinion of this Department, that based on the design and construction of the "Egg Master/Egg King" machine, which is in violation of the New Jersey State Sanitary Code-N.J.A.C. 8:24-5.1 a & b (see enclosure), that its implication as a possible cause in the recent food-borne outbreak (Salmonella enteritidis) at Harrah's Marina Casino cannot be refuted.

This conclusion is based on the following two factors: the comingling of egg product and egg shell, and the inability of this machine to be properly cleaned and sanitized under normal operating conditions as evidenced by our inspections.

Investigations and reports were conducted by the following:

Dawn Hays, Janet Reinhard and Martin Connie of the Atlantic City Health Department.

DAH:pas

Attachment A

99-511. XR 498,488 EX

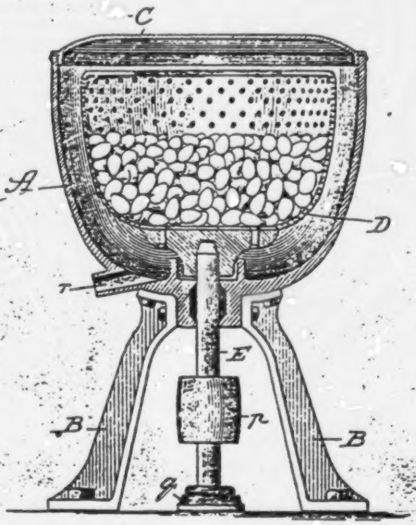
EXAMINER'S ROOM.

(No Model.)

M. J. POWER.

PROCESS OF EXTRACTING THE CONTENTS OF EGGS.

No. 498,488. Patented May 30, 1893.



Witnesses:
[illegible]
Clifford N. White

Inventor:
Martin J. Power,
By Dyrenforth & Dyrenforth,
Att'ys

UNITED STATES PATENT OFFICE.

MARTIN J. POWER, OF CHICAGO, ILLINOIS.

PROCESS OF EXTRACTING THE CONTENTS OF EGGS.

SPECIFICATION forming part of Letters Patent No. 498,488, dated May 30, 1893.

Application filed September 12, 1892. Serial No. 445,621. (No model.)

To all whom it may concern:

Be it known that I, MARTIN J. POWER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Processes of Extracting the Contents of Eggs, of which the following is a specification.

My invention relates to an improved process, whereby the contents, (meaning thereby the whites and yelks) of raw eggs may be extracted expeditiously, thoroughly and in a cleanly manner.

The industry of supplying the contents of eggs, beaten up and frozen, to preserve them, to consumers, particularly bakers who use the product for frosting and other purposes, has grown to one of considerable importance. It is customary to gage the contract price for the supply according to the weight of the extracted product under the stipulation that each dozen of eggs shall produce a certain weight of the product. Accordingly it is an object with the dealer who furnishes the supply to obtain the largest possible quantity of the contents of eggs.

Hitherto the method most commonly resorted to for separating the contents of eggs from their shells has been the primitive one of breaking the shells by hand and emptying them of their contents, a force of boys and girls being employed to do the work. This method is expensive, not only because of the amount of help required to practice it, but because of the waste which ensues owing to the practical impossibility of thoroughly evacuating the shells.

By my improved process, hereinafter described, I am enabled to discharge the contents of raw eggs economically in every sense of the word, since it is expeditious, thorough and cleanly.

I have discovered that by subjecting eggs to the action of centrifugal force, as in an ordinary or any suitable centrifugal machine, such, for example, as is used in laundries for drying clothes, and which I may fill to any desired extent with the eggs to be treated, the centrifugal action will crack the shells sufficiently to permit their contents to discharge, and will discharge them so thoroughly and completely, that the refuse of shells will contain no remnant or material remnant of the original white and yolks.

Accordingly, my invention consists, in its broadest sense, in extracting the contents of eggs from their shells, by subjecting them to the action of centrifugal force.

In the accompanying drawing, I show, by a view in sectional elevation, a well known form of centrifugal machine which I may use for the practice of my invention.

A is an outer imperforate, bowl-shaped receptacle supported on a suitable stand B, and provided with a removable cover C, and, at its base, with a discharge outlet r. Within the receptacle A is a perforated horizontally rotary receptacle D, which should be at least partially covered, as represented, and rotation of which inside the imperforate receptacle A is produced by the rapid revolution of a vertical shaft E secured, at its upper end, to the base of the inner receptacle to which it extends through the base of the outer receptacle, forming one journal bearing for it; the journal bearing for the lower end of the shaft is shown as provided in a step q. A belt-pulley p is provided on the shaft to afford the medium for driving it from a suitable power, not shown.

The eggs to be treated are placed inside the inner perforate receptacle D in number, preferably, to fill it half full, more or less. By then rotating the receptacle D at a high rate of speed, the centrifugal action exerted on the eggs will slightly crack the shells and empty them of their contents, which will be forced through the pile of shells and out of the perforate receptacle into the outer imperforate receptacle A, whence they run out at the outlet r into a suitable holder (not shown) to be saved for use, storage or treatment (as by freezing) preparatory to storage.

What I claim as new, and desire to secure by Letters Patent, is—

1. The process of extracting the contents of eggs from their shells, which consists in subjecting any desired number of the eggs to be treated to the action of centrifugal force, substantially as described.

2. The process of extracting the contents of eggs from their shells, which consists in piling the eggs to be treated in a rotary, perforated receptacle, rapidly rotating the said receptacle, thereby breaking the shells and discharging their contents through the pile of shells into an imperforate receptacle, and gathering the discharged contents, substantially as described.

MARTIN J. POWER.

In presence of—
M. J. FROST,

Mr. Coelho. Thank you, Doug. I appreciate your testimony and your comments.

That concludes, as I understand, all the members. Any questions of Mr. Bereuter?

[No response.]

Mr. Coelho. That concludes the testimony of all of our colleagues. Mrs. Smith I do not see here. Her prepared statement will be made a part of the record.

[The prepared statement of Mrs. Smith appears at the conclusion of the hearing.]

REMARKS OF HON. TONY COELHO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. Coelho. I want to point out to our witnesses that we will be adhering closely to the 5 minute rule, so don't use the precedent established by my colleagues as the way that this hearing will be conducted. [Laughter.]

Second, I want to tell you that we are not here aggressively after any particular machine or whatever. There is a dispute that is going on, and in my opinion unfortunately, between USDA and FDA as to who does or does not have jurisdiction. The Congress has entered this fight and passed a law some time ago. It is not a question of whether or not the Federal Government should be involved. The Federal Government is involved. We passed an act and said that USDA has jurisdiction, and now what we find is that there is a question of how far that jurisdiction goes.

USDA has assumed that restaurants, et cetera, were being handled by FDA. FDA says it's USDA. We think we have a responsibility, as the committee of jurisdiction, to clear up that matter, and we will. If we have to subpoena people to be here, we will follow that procedure, so the dispute as to who has jurisdiction is going to be resolved by this subcommittee one way or the other. You can depend on that. That's the first thing that we have to do.

The second thing, as to whether this machine can or cannot be cleaned, is something that we are going to be willing to listen to experts, and if necessary we will have the appropriate studies done to make that determination, but I think that what we have heard so far from my colleagues is that it is not a black-and-white situation; that there is a legitimate doubt as to whether or not this machine is causing problems and whether or not it can be cleaned in order to prevent problems from occurring.

The question is whether or not there is somebody who has the jurisdiction monitoring to make sure that we are not injuring the public health. That is our responsibility as Federal officials, and we do have jurisdiction, I might want to state very categorically for the record. As long as I am chairman of this subcommittee, I am not going to permit a situation to occur where there can be some finger-pointing that we have not followed through on some accusation that has been made. When people end up being hospitalized, that is serious, and as chairman of this subcommittee, we are going to make sure that everything is cleared as we move into this.

So that is the whole purpose of this hearing, and I hope people don't feel that we're into a witch hunt or anything else. That is not the case. As I promised Mr. Badham in my conversation with him, we don't have any predetermined conclusion for these hearings. I didn't know anything about this issue until I heard about it as an amendment on the floor, and we have done quick studies since then. I don't have any personal conclusion myself, and that's why we are having the hearings.

I thank my colleagues very much for appearing. Now we would like to get into the question of jurisdiction and so forth. Our expert on jurisdiction as far as the Federal Government is concerned—or at least I am sure that's why he is here—is Jim Handley, who is the Administrator of the Agricultural Marketing Service for the Department of Agriculture. Jim, welcome. I'm sure you have the answers to all our questions.

STATEMENT OF JAMES C. HANDLEY, ADMINISTRATOR, AGRICULTURAL MARKETING SERVICE, U.S. DEPARTMENT OF AGRICULTURE, ACCOMPANIED BY CONNOR KENNETT, DIRECTOR, AGRICULTURAL MARKETING SERVICE, POULTRY DIVISION, AND TOM WALSH, OFFICE OF THE GENERAL COUNSEL

Mr. HANDLEY. Thank you, Mr. Chairman and members of the subcommittee. I appreciate this opportunity to appear before the Subcommittee on Livestock, Dairy, and Poultry to discuss the Egg Products Inspection Act and the mandatory eggs and egg products inspection programs administered by the USDA. I am accompanied today by Mr. Connor Kennett, the Division Director of our Poultry Division, and by Tom Walsh from the Office of the General Counsel at USDA.

In the interest of time, Mr. Chairman, I am offering for the record a detailed statement covering the administration and enforcement of the Egg Products Inspection Act.

Mr. COELHO. Thank you, Jim. It will be made a part of the record, without objection. Let's proceed.

Mr. HANDLEY. Thank you. I will limit my oral statement to jurisdictional matters between USDA and the Department of Health and Human Services, and regulation of the use of the centrifuge egg breaker.

Jurisdiction between USDA and HHS, as you say, is in question, and that's the whole crux of this. The EPIA gives——

Mr. COELHO. Excuse me, Jim. Before you start, I assume you are aware—I don't know if our staff has kept you informed—are you aware of what is happening from our level? As you present your statement, I want to make sure that you understand what I'm dealing with.

Mr. HANDLEY. I'm not sure of that.

Mr. COELHO. FDA does not want to testify.

Mr. HANDLEY. Yes, sir.

Mr. COELHO. They say they do not have jurisdiction, and so they do not want to testify, so they are not testifying. We will eventually subpoena them if we have to, to get them here, but we are told by you that you don't have jurisdiction.

Mr. HANDLEY. That's correct.

Mr. **Coelho**. They say they don't have jurisdiction, so there is a gap here someplace, so as you present your testimony, we want you to address the gap.

Mr. **Handley**. Yes, sir. I think that the testimony does address that, and then of course if you don't feel it does, we'll be happy to answer any questions when we finish. Thank you.

The Egg Products Inspection Act does give the Secretary of Agriculture the authority to continuously inspect the production of egg products in official plants and to conduct surveillance inspections of all businesses which buy, sell, or process eggs, in order to assure compliance with section 8 of the act. USDA has also been given authority to prescribe requirements in connection with the sanitation, facilities, operations, and equipment at official plants, and to devise bookkeeping requirements for plants and handlers subject to the Egg Products Inspection Act. In addition, USDA may, when appropriate, prescribe the conditions for several exemptions specified in section 15 of the act.

The act gives the Secretary of Health and Human Services jurisdiction to make inspections as deemed appropriate in food manufacturing establishments, institutions, and restaurants which use at least U.S. consumer grade B eggs, to assure compliance with the requirements of section 8 of the act and to promulgate recordkeeping requirements for the facilities which FDA is required to oversee.

Because the act confers jurisdiction on both agencies, it has been necessary for AMS and the Food and Drug Administration to maintain a close working relationship. This relationship was first formalized through a memorandum of understanding in 1971. The memorandum defines the respective authorities and responsibilities of AMS and FDA with respect to the inspection of facilities, the determination of compliance with the act, and the exercise of administrative detention authority.

For example, under the memorandum of understanding we notify FDA about shipments of imported eggs, to give them an opportunity to determine compliance with pesticide and chemical residue requirements. We regularly discuss with them their interpretation of the standards, to identify which questions arise in our label approval work

Section 6 of the act confers exclusively upon the Secretary of Agriculture the authority to promulgate regulations which govern the sanitary practices, operating procedures, facilities, and equipment at official plants processing eggs under continuous inspection of the USDA. Under that authority, the Secretary has promulgated a range of regulations which address, for example, candling and transfer room facilities and equipment, breaking room facilities and operation, spray process drying facilities and operations, and health and hygiene of personnel.

In connection with our enforcement of these regulations, we have consistently prohibited the use of centrifuge egg-breaking machines in official egg processing plants because these machines do not satisfy the preconditions for adequate inspection under the act. There are two principal reasons for this prohibition.

First, the wholesomeness of each egg must be determined by organoleptic—or sight and smell—inspection before each egg may be added to a tank or churn. Mass breaking techniques do not allow this important inspection and, as a result, the liquid from the unwholesome egg can be mixed with the liquid from the wholesome egg and go undetected in the final product. Even after grading, about 1 percent of grade AA and grade A eggs are leakers, loss, and dirties when delivered to their destination. Therefore, without egg-by-egg inspection after breaking, the possibility for contamination of egg product exists even if eggs of the highest grade are used.

Second, centrifuge egg-breaking allows the eggshell and egg membrane to commingle in the egg liquid. It has been determined that this commingling may result in contamination because eggshells serve as a natural harbor for salmonella and other pathogenic bacteria. Studies have shown that even when eggs are washed and sanitized, bacteria may still exist in the shell. The egg liquid could become contaminated when it passes through the broken eggshells in the centrifuge.

We believe that there is a second basis for continuing to prohibit the use of centrifuge egg-breaking machines in official egg processing plants. While the Secretary of Agriculture has broad authority to regulate the operation of official egg processing plants under section 6 of the act, the EPIA does not confer to the Secretary parallel authority to promulgate regulations with respect to sanitation, processing conditions, or equipment in food manufacturing establishments, institutions, or restaurants that use grade B or better eggs.

Mr. COELHO. Jim, you want to stop right there.

Mr. HANDLEY. Sure.

Mr. COELHO. Because that's the whole crux of the problem. Everything else that you're saying or might say is not necessary, and we can make it a part of the record.

Mr. HANDLEY. Certainly.

[The prepared statement of Mr. Handley follows:]

Statement of James C. Handley
Administrator of the Agricultural Marketing Service
United States Department of Agriculture
Before the House Committee on Agriculture
Subcommittee on Livestock, Dairy, and Poultry

November 21, 1985

Mr. Chairman, and members of the Subcommittee, we appreciate this opportunity to appear before the Subcommittee on Livestock, Dairy, and Poultry to discuss the Egg Products Inspection Act (Public Law 91-597) and the mandatory eggs and egg products inspection programs administered by the United States Department of Agriculture (USDA). I am accompanied today by Connor Kennett, Director of the AMS Poultry Divison which has responsibility for the eggs and egg products inspection programs.

Eggs and egg products are an important part of the Nation's total food supply. The Department is proud of the success the egg inspection program has enjoyed in helping to protect the health and safety of the public. The vastly improved safety position of eggs and egg products is due largely to the adoption of measures by Congress to see that eggs and egg products distributed to consumers are wholesome and not adulterated. On December 29, 1970, the Egg Products Inspection Act (EPIA) was signed and became effective in two stages. The first stage, the continuous inplant egg products inspection portion, became effective July 1, 1971. It requires all egg breaking and drying plants, including those in intrastate commerce, producing liquid, dried, or frozen egg products to operate under continuous USDA inspection. The second stage, the shell egg surveillance portion, became effective July, 1, 1972. This portion controls the disposition of restricted eggs (checked, i.e., cracked, and dirty, leaking, loss, inedible, and incubator rejects) and requires quarterly inspection of each shell egg handler packing eggs for the ultimate consumer.

Mr. Chairman, we have available for the Record copies of the Act, the regulations governing the inspection of eggs and egg products, the memorandum of understanding between AMS and the Food and Drug Administration (FDA) regarding responsibilities under the Act and our annual reports to Congress on the Act from 1972 through 1984. The annual reports cover program activities for each calendar year.

Now let me outline points I would like to cover in my testimony. First, I will discuss the safety and wholesomeness effects of the Act since its implementation. Next, I will address the inplant egg products inspection and shell egg surveillance inspection programs. I will briefly discuss Federal-State cooperation, violations and regulatory actions, imports, and proposed legislation to amend the Act. Finally, I will address jurisdictional matters between USDA and the Department of Health and Human Services and regulation of the use of the centrifuge as an egg breaker.

Safety and Wholesomeness Effects of the Act

One of the primary effects of the mandatory inspection of eggs and egg products has been to prevent restricted eggs, that is, dirty, leaking, loss, inedible, and incubator rejects from being sold in consumption channels. Restricted eggs, except for checks and dirties, are denatured or destroyed at the point of segregation, which is normally the shell egg packing plant or hatchery. Leakers, loss, inedible and incubator rejects are unfit for human food, because they are either a health hazard or aesthetically unacceptable for human consumption. Checked eggs must be sent to a USDA inspected egg products plant where they are further inspected and segregated. Dirty eggs must be washed at the shell egg packing plant or sent to an egg products plant for washing and segreation.

Historically, eggs and egg products have been an imporant vehicle in transmission of human salmonellosis, a disease which can result in mortality for infants, the elderly, and infirm individuals. Since 1966, Salmonella outbreaks caused by eggs have decreased dramatically. According to a report published this year by the National Research Council of the National Academy of Sciences, a major factor for this decrease was enforcement of the EPIA. Also contributing to this decrease has been the fact that USDA, prior to enactment of the EPIA, began in 1966 to require all egg products to be pasteurized in plants operating under the voluntary inspection program and at about the same time FDA required pasteurization in plants involved in interstate commerce. Prior to July 1,1971, this voluntary user-fee based program provided inspection for about 75 percent of the liquid, frozen, and dried egg products produced in this country. Most of the egg-associated outbreaks which occur today involve consumer misuse of shell eggs. These few outbreaks have been attributed on most occasions to temperature abuses in the home as opposed to the consumption of high-risk eggs which was possible before the passage of the EPIA.

These achievements are related to a number of factors. Restricted eggs can no longer be sold to consumers, food manufacturing plants, nursing homes, hospitals, and restaurants and similar facilities. This has effectively removed a large portion of the high-risk shell eggs from consumption channels. Implementation of the act upgraded the egg breaking and drying industry. While about 75 percent of the egg products produced in this country came from plants operating under USDA's voluntary egg products inspection program at time of passage of the EPIA, there were hundreds of small plants along with a few large ones that operated without inspection. When the EPIA became effective, these plants either closed or brought their operations into compliance with USDA inspection requirements.

Inplant Egg Products Inspection Program

The EPIA requires plants processing eggs into egg products to operate under continuous USDA inspection. Let me now describe how this program works. All facilities and equipment in a plant must be approved by the Department. Eggs received from farms or egg handlers are stored under refrigeration in coolers. The eggs are next moved to machines where they are washed and sanitized. They are then mass candled or graded to remove eggs unfit for breaking. Except for "checks" (cracked eggs), the quality of eggs being broken is equivalent to U.S. Grade B or better. Concerning "checks," we estimate that about 12-15 percent of the eggs being broken fall into this category. Grade B eggs may contain 10 percent checks. Thus, the quality of eggs being broken in USDA inspected egg products plants is essentially the same as eggs that may be used in restaurants, bakeries, and other food manufacturing plants. The eggs then move to breaking machines in another room where each egg is individually broken, the shell removed, and the content of each egg is again inspected by sight and smell. Any egg not fit for human food, which was previously detected, is removed. At this stage, the yolks and whites may be separated depending on the types of products the plant is producing. The liquid egg is then filtered to remove any incidental shell particles, or foreign matter, cooled to prevent microbial growth, and mixed or blended with other ingredients. Finally, the product is pasteurized and then packed in a separate room. The finished product may be frozen, held under refrigeration for shipment as liquid, or dried to produce egg powder. All of the above operations are conducted under very strict sanitation requirements and under continuous USDA inspection.

Another important stage in the process is the final inspection procedure. Before any egg products may leave the plant, the inspector performs a final product inspection. This involves an organoleptic examination of the product for wholesome condition, test weighing for net weight of containers, and sampling for laboratory analysis.

USDA requires laboratory testing on a routine basis for Salmonella and a variety of chemical residues. Last year, 54,000 laboratory analyses for Salmonella were performed by USDA and private laboratories. Of these tests, 138 samples were positive for Salmonella. The positive product represented by such analyses were reprocessed and repasteurized to destroy the Salmonella bacteria. Also, there were 760 samples analyzed for chemical residues. Over 8,600 individual analyses were performed on these samples for the following chemicals: aldrin, benzene, hexachloride, DDT, DDE, TDE, dieldrin, endrin, hexachlorobenzene, heptachlor, heptachlor epoxide, lindane, chlordane, toxaphene, ploychlorinated biphenyls, and ethylene dibromide. All product tested was below the FDA or EPA action levels for residues of these chemicals.

Last year, there were 102 officially inspected egg products plants as compared to 145 plants at the beginning of the program in 1971. While the number of official plants has decreased, the volume of inspected egg products has remained about the same. Also, last year USDA inspected and certified as wholesome just over 1 billion pounds of liquid egg products which were sold in various forms such as frozen and dried. An additional 68 million pounds of eggs were found unfit for human food and destroyed or denatured. A large percentage of this condemned product was salvaged for use in pet foods.

Shell Egg Survellance Inspection

I will now describe the shell egg surveillance inspection program. The EPIA provides for the control of the disposition of restricted eggs and requires bakeries and food manufacturing plants, institutions, and restaurants, retail stores, and similar facilities and institutions to use only eggs that contain no more restricted eggs than permitted in U.S. Consumer Grade B. State of the art grading and marketing techniques will not remove all restricted eggs from

Grade AA, A, and B packs. Hence, a tolerance must be established. The tolerance is based on the quality that can be produced under good commercial operating procedures. For example, at destination Grade B eggs may contain up to 10 percent checks and 1 percent dirties, leakers, or loss (in any combination).

Leakers, loss, inedible, and incubator reject eggs may not be used for human food purposes. Checks (cracked eggs) can be sent only to official egg products plants operating under continuous USDA inspection for proper segregation and disposition. Dirties may also be sent to official egg products plants operating under continuous USDA inspection for proper segregation and disposition, or to another shell egg plant for cleaning.

Control of restricted eggs is maintained through periodic visits to egg handlers and users. At least quarterly, USDA makes inspection visits to egg handlers who pack eggs for sale to the ultimate consumer. Inspectors check to see that labeling of eggs on-hand is correct, that inedible liquid is properly denatured or destroyed, and that records are properly maintained which show receipt and/or shipment of restricted eggs or inedible products. Inspection of food manufacturing establishments, such as bakeries, institutions, and restaurants, is the responsibility of the Food and Drug Administration of the Department of Health and Human Services (HHS). The Act authorizes the Secretary of HHS to conduct such inspections as deemed appropriate to assure compliance with the requirements of the Act.

Last year, 3,698 egg handlers were registered. Of this number, 2,282 were egg packing plants, 600 were hatcheries, and the remainder were other egg handlers such as distributors. Over 13,500 inspection visits were made to determine compliance with the act. Nearly 11,500 of these visits were to handlers packing for consumers.

Federal and State Cooperation

The Secretary of Agriculture is authorized to cooperate with appropriate State and other governmental agencies to carry out provisions of the Act, and to reimburse such agencies for the cost they incur.

In 1971 during the first few weeks of the egg products inspection program, practically all of the States had their regulatory people visit known egg breaking plants that had not applied for inspection to determine that such plants had ceased breaking operations. We estimate that about 750 individuals or firms ceased breaking. In the majority of these cases, egg breaking was only a small operation conducted in conjunction with a shell egg grading activity. Also, in 1973, the first full year of the shell egg surveillance program, 586 State employees were trained to handle the quarterly surveillance inspections. The Department continues to receive excellent cooperation from States in administering both the egg products and shell egg surveillance inspection programs.

During 1985, 23 staff-years of inplant inspection was provided by State employees. Approximately one-sixth of our inplant egg products inspection work is performed by State employees. Last year, there were approximately 40 State employee staff-years provided for the shell egg surveillance work. In all but four States (Colorado, Michigan, Missouri, and Texas), States perform the surveillance work for USDA.

Violations and Regulatory Actions

Violations of the Act are normally identified during inspections of shell egg handlers and occasionally at official egg products plants. The Poultry Division has a regulatory office in each of its four regions and one in Washington to handle violations. In addition, the agency has a staff which does compliance work. When instances of repeated or serious violations are discovered, formal action may be initiated to obtain compliance. Compliance actions may consist of an information or warning letter informing the violator of the requirements of the Act and placing the violator on notice that additional violations could result in criminal or administrative action. This may involve a request that the Office of General Counsel initiate criminal or administrative proceedings against the reported violator.

In practice, most violations identified at official egg products plants are relatively minor and are resolved with a letter of information or warning. However, in three instances plant approval has been withdrawn for failure to maintain plant premises, facilities, and equipment in a satisfactory state of repair. In another instance, egg products inspection service was withdrawn from one firm for serious and repeated violations of the Act involving failure to separate ineligible eggs from those acceptable for processing, failure to reexamine eggs after breaking, and failure to properly denature inedible egg products. This action took almost 7 years after all the firm's avenues of appeal were exhausted. This situation indicates the need for strengthening the withdrawal provision of the Act, because such firms may continue to operate during the lengthy appeals process. I will discuss this more fully later.

In 1972 to 1984, approximately 225,000 inspection visits have been made to shell egg handlers. These inspection visits identified approximately 19,900 violations. Most of the violations were minor deficiencies, such as incomplete records, and were corrected immediately in the field. However, 3,471 violations of a more serious nature were referred to Washington for review. About 2,800 of these violations were disposed of through letters of information or warning. About 700 required no action.

Additionally during 1972 through 1984, about 410 instances involved eggs being broken without inspection. Approximately 667,000 pounds of products broken without inspection were detained and voluntarily destroyed.

Most significantly, the Department has initiated 27 administrative or criminal proceedings and has been successful in each case. These efforts have played a major role in the effective administration of the Act.

Imports

The Act provides that egg products may be imported only from countries which have egg products inspection systems equal to the USDA system. In October 1977, Canada became the first country eligible to export egg products to this country. It is still the only country with an approved inspection program. There were about 2 million pounds of egg products imported from Canada in 1984. The Act requires an annual review of each approved foreign egg products inspection system by a USDA representative. In September 1985, a review was made of the Canadian inspection program, and it was determined that the Canadian inspection program was in compliance with the Act and the regulations.

The Netherlands has applied for approval of its inspection system. We have reviewed their inspection requirements to determine equivalency with the USDA system. Due to difficulties with their regulations and laws, further action is pending on this matter.

We are submitting as exhibits with this testimony two charts outlining Federal and State resources required to provide both egg products and shell egg surveillance inspection services. The chart also includes volume inspected, staffing, and funding data, and covers, on a fiscal year basis, each year the program has operated.

Proposed Legislation to Amend the Act

In August 1985, the Department recommended to Congress the enactment of a draft bill to amend the Federal Meat Inspection Act, the Poultry Products Inspection Act, and the Egg Products Inspection Act. I will discuss the two major features of the bill as they relate to the Egg Products Inspection Act.

First, the present system of intensive inspection involves the daily, on-site presence of inspectors in egg products plants to cover all processing operations. This is known as "continuous" inspection. Since inception of the Act, processing methods have improved as have plant-operated quality control programs. Better equipment, safeguards, and improved methods of monitoring processing operations have been developed. With these innovations, the original degree of inspection required is no longer necessary or practical in every instance. With the exception of egg breaking operations, which still must remain under continuous inspection because it is the only way to assure that eggs not fit for human food are removed, USDA needs the flexibility to allocate its inspection resources in a way that will deal more effectively and economically with the many different kinds of inspection situations faced today. Hence, the Department is recommending that the Secretary be given more discretion in determining appropriate methods of conducting inspection on a plant-by-plant basis. Some processing operations such as cooling, blending, drying, and packaging, etc, can be handled on a spot-check basis.

Factors to be considered by the Secretary in determining the intensity of inspection would include: (1) The nature and frequency of the plant's processing operations, (2) the adequacy and reliability of a plant's product monitoring system, (3) the plant's history of compliance with inspection requirements, and such other factors as the Secretary deems appropriate.

Additionally, the Act requires that all shell egg handlers packing eggs for the ultimate consumer be visited at least once each calendar quarter to assure that eggs not fit for human consumption are destroyed or diverted to nonhuman food use. Experience gained in administering this portion of the Act has shown that the actual level of compliance with these provisions in most plants is high, and again the original degree of inspection required is no longer necessary or practical. Those with a history of compliance need not be visited each quarter. Those with a history of noncompliance require more frequent visits. Hence, the Department is recommending that the Secretary be given the authority to reduce the required number of shell egg surveillance visits from four to one per year. This would not preclude more frequent visits where warranted.

The second feature involves the Secretary's authority to withdraw or refuse inspection service. The egg products industry is, as a whole, responsible, properly managed and concerned about complying with inspection requirements. USDA has learned over the years, however, that a small percentage of the industry cannot or will not consistently operate within acceptable bounds. This minority accounts for much adverse publicity from groups inside and outside Government, bringing the entire industry under a cloud of suspicion and raising questions about the effectiveness of Government regulation.

In general, we believe that authority to refuse or withdraw inspection service can be our most effective deterrent. It has become apparent, however, that this authority is too limited and, therefore, must be strengthened.

Refusal or withdrawal of service may be applied upon a determination of unfitness to engage in any business requiring inspection because the applicant or recipient, or anyone responsibly connected therewith, has been convicted of certain crimes such as distributing adulterated food, fraud, bribery, or extortion. However, the Secretary cannot act until after the applicant or recipient has an opportunity for an administrative hearing and judicial review. Years may pass before these proceedings are completed. Throughout this process, the plant may continue to operate. Therefore, along with the discretionary inspection amendments, the Department is recommending that the Secretary be authorized to deny or suspend inspection service pending opportunity for an expedited hearing and any judicial review where such action is deemed necessary to protect the health or welfare of consumers.

Additionally, there is no specific authority in the Act for withdrawal of inspection when a plant fails to destroy condemned product; fails to maintain sanitary conditions; or threatens or forcibly assaults, intimidates, or interferes with an inspector. Presently, inspection can be withheld only temporarily in such instances until the situation is corrected. These suspensions are usually very short term, since operations resume once the deficiencies have been corrected. To cover these situations, the proposed bill would expand the grounds on which inspection could be refused or withdrawn when a recipient recurringly fails to comply with the requirements of the Act or regulations.

Jurisdiction Between USDA and HHS under the Act

As discussed above, the EPIA gives the Secretary of Agriculture the authority to continuously inspect the production of egg products in official plants, and to conduct surveillance inspections of all businesses which buy, sell, or process eggs in order to assure compliance with section 8 of the Act. USDA has also been given authority to prescribe requirements in connection with the sanitation, facilities, operations and equipment at "official plants," and to devise recordkeeping requirements for plants and handlers subject to the EPIA. In addition, USDA may, when appropriate, prescribe the conditions for the several exemptions specified in section 15 of the Act.

The Act gives the Secretary of Health and Human Services jurisdiction to make inspections as deemed appropriate in food manufacturing establishments, institutions and restaurants which use at least U.S. Consumer Grade B eggs to assure compliance with the requirements of section 8 of the act, and to promulgate recordkeeping requirements for the facilities which FDA is required to oversee.

Because the Act confers jurisdiction on both agencies, it has been necessary for AMS and FDA to maintain a close working relationship. This relationship was first formalized through a Memorandum of Understanding in 1971. The memorandum defines the respective authorities and responsibilities of AMS and FDA with respect to the inspection of facilities, determination of compliance with the Act, and the exercise of administrative detention authority. For example, under the Memorandum of Understanding we notify FDA about shipments of imported eggs to give them an opportunity to determine compliance with pesticide and chemical residue requirements. We regularly discuss with them their interpretation of the standards of identity when questions arise in our label approval work.

Section 6 of the Act confers exclusively upon the Secretary of Agriculture the authority to promulgate regulations which govern the sanitary practices, operating procedures, facilities, and equipment at official plants processing eggs under the continuous inspection of the USDA. Under that authority, the Secretary has promulgated a range of regulations which address, for example, candling and transfer room facilities and equipment, breaking room facilities and operation, spray process drying facilities and operations, and health and hygiene of personnel.

In connection with its enforcement of these regulations, USDA has consistently prohibited the use of centrifuge egg-breaking machines in official egg processing plants, because machines do not satisfy the preconditions for adequate inspection under the Act.

There are two principal reasons for this prohibition. First, the wholesomeness of each individual egg must be determined by organoleptic (by sight and smell) inspection before each egg may be added to a tank or churn. Mass breaking techniques do not allow this important inspection, and as a result, the liquid from the unwholesome egg can be mixed with the liquid from wholesome eggs and go undetected in the final product. Even after grading, about 1 percent of Grades AA and A eggs are leakers, loss and dirties when delivered to their destination. Therefore, without egg-by-egg inspection after breaking, the possibility for contamination of the egg product exists even if eggs of the highest grade are used. Second, centrifuge egg-breaking allows the egg shell and egg membrane to commingle with the egg liquid. It has been determined that this commingling may result in contamination because egg shells serve as a natural harbor for Salmonella and other pathogenic bacteria. Studies have shown that even when eggs are washed and sanitized, bacteria may still exist in the shell. The egg liquid could become contaminated when it passes through the broken egg shells in the centrifuge.

We believe that there is a sound basis for continuing to prohibit the use of centrifuge egg-breaking machines in official egg processing plants.

While the Secretary of Agriculture has broad authority to regulate the operation of official egg processing plants under section 6 of the Act, EFIA does not confer on the Secretary parallel authority to promulgate regulations with respect to sanitation, processing conditions, or equipment in food manufacturing establishments, institutions, or restaurants that use Grade B or better eggs. Nor does the EPIA grant statutory authority to HHS to regulate egg-breaking in these establishments. It is our understanding, however, that State and local health agencies have such authority.

Under the EPIA, the Food and Drug Administration of HHS is required to conduct such inspections as it deems appropriate of food manufacturing establishments, restaurants, and similar institutions. In addition, the Secretary of HHS has related regulatory authority pursuant to other statutes such as the Federal Food, Drug and Cosmetic Act. Therefore, with regard to the analysis of the potential problems surrounding use of the centrifuge egg-breaking machine in such establishments and institutions, we have deferred to the expertise of FDA and State authorities.

Conclusion

We believe the administration and enforcement of the Egg Products Inspection Act has been effective, as a result, the consuming public has benefited from a supply of safe and wholesome eggs and egg products. The egg products industry has benefited because users have confidence in their products and they can compete on a fair basis with each other in the marketplace. As with any program, we must keep abreast of technological developments and strive to improve our efficiency and effectiveness.

Mr. Chairman, this concludes my statement. I will be glad to respond to any questions you may have.

(Exhibits follow:)

EXHIBIT A

YEARLY SUMMARY INFORMATION
EGG PRODUCTS INSPECTION PROGRAM

FISCAL YEAR	NUMBER PLANTS INSPECTED	POUNDS PRODUCT INSPECTED 1/	POUNDS PRODUCT CONDEMNED 1/2/	TOTAL STAFF YEARS WORKED 3/	PROGRAM COSTS 4/
1972 (Program Initiated 7/1/71)	153	1,104	Not Available	Not Available	3,573
1973	152	885	Not Available	155	3,963
1974	149	999	Not Available	150	3,313
1975	146	909	Not Available	144	3,661
1976	142	910	43	143	3,786
1977	141	1,082	52	161	4,118
1978	138	1,105	52	183	4,133
1979	126	1,105	56	181	4,441
1980	119	1,105	57	187	5,198
1981	118	1,162	59	185	5,347
1982	113	1,140	59	186	6,105
1983	111	1,154	60	180	6,272
1984	102	1,176	61	184	6,738
1985	102	1,303	68	180 (estimate)	6,665

1/ Million Pounds

2/ These figures include condemned liquid from all egg products processing plants. Additionally, they include inedible product from shell egg operations in plants where dual egg products-shell egg operations exist.

3/ From 1973-1977, inplant inspector staff years only reported. From 1978 to present, staff years include both inplant and supervisory personnel.

4/ Thousand Dollars

EXHIBIT B

YEARLY SUMMARY INFORMATION
SHELL EGG SURVEILLANCE PROGRAM

FISCAL YEAR	NUMBER SHELL EGG HANDLING ESTABLISHMENTS REGISTERED	NUMBER INSPECTIONS PERFORMED	NUMBER PRODUCT DETENTIONS	TOTAL CASES EGGS RETAINED 1/	ESTIMATED COMBINED FED/ST STAFF YEARS WORKED	FEDERAL INSPECTION COSTS 2/	REIMBURSEMENTS TO STATES FOR INSPECTION COSTS 2/	TOTAL PROGRAM COSTS 2/
(Program Initiated 7/1/72)								
1973	6,815	24,927	Not Available		Not Available	900	1,015	1,915
1974	6,435	26,793	1,447	36,878	Not Available	893	1,020	1,913
1975	6,142	26,208	1,344	38,127	Not Available	817	1,010	1,827
1976	5,743	24,779	1,405	39,430	Not Available	921	1,022	1,943
1977	5,416	22,857	1,168	33,644	Not Available	961	1,065	2,026
1978	5,154	21,595	1,102	42,649	67	1,066	1,106	2,172
1979	4,980	20,844	1,174	49,809	73	1,022	1,108	2,130
1980	4,723	18,729	1,076	64,528	82	1,136	1,175	2,311
1981	4,513	17,439	996	48,581	78	1,241	1,179	2,420
1982	4,246	16,563	940	54,203	66	1,241	1,214	2,455
1983	4,072	15,335	980	49,958	62	1,373	1,199	2,572
1984	3,902	13,770	981	56,526	66	1,447	1,172	2,619
1985	3,698	13,554	1,000	66,124	64	1,362	1,155	2,517

1/ Eggs were reworked, brought into compliance, and released or otherwise handled in accordance with program alternatives.

2/ Thousand Dollars

Mr. Coelho. You were saying, in effect, that USDA only has jurisdiction over the machines in those plants that you have jurisdiction over. FDA, in their letter to us in effect say—well, the bottom line is that they only have jurisdiction over products but not machines, so while they can investigate or analyze a product as a result of this machine, they do not have any jurisdiction over the machine.

So what we have, in effect, is the bureaucrats—in the nice sense—the bureaucrats providing a tremendous gap here. Who has the jurisdiction to look at a machine, as to whether or not it is causing the problem, or if it's good or bad or whatever? I don't care if this machine is good or bad. It doesn't bother me, but if it is causing the problem, why can't we clarify if either FDA or USDA has the jurisdiction on this machine? Are you, in effect, saying FDA is wrong? I want you to answer it, Jim, not an attorney, because I'm not an attorney. I won't understand what they tell you.

Mr. Handley. Well, we have had a good bit of discussion about this, and we don't conclude that they are wrong necessarily but we just maintain that we do not have the authority.

Mr. Coelho. Jim, let me just ask you: We have been elected to uphold the public trust. You are responsible for a job. People are being hospitalized because of an alleged poisoning. The allegation by county officials is that this machine is doing it, so we're talking about something serious. We're not talking about some allegations.

What we have, now—think of John Q. Citizen out there—what we have now is the Department of Agriculture saying, "Under the law we can't do this," and the FDA saying, "Under the law we can only do this," so in effect what you're telling me is that we in the Congress have royally screwed up and that we have permitted a major gap. Is that what you're saying, that under the law there is nobody who has jurisdiction?

Mr. Handley. In our opinion there is a void there. In the case of the——

Mr. Coelho. OK, so that you are, in effect, saying—your attorneys and so forth—and I'm not trying to put you on the spot, I'm trying to be educated—you are, in effect, saying that under the law there is nobody who has jurisdiction to check whether or not this machine is causing these problems, even though we have basically given you the authority. Under the act we have given you the authority, but your authority stops at the restaurant's door, in effect, you are saying.

Mr. Handley. Well, in our opinion the Congress clearly intended some authority to be given to the FDA, or they would not have addressed specifically those institutions that are in question now.

Mr. Coelho. OK, but let's address the void. USDA says you're right. They say that they clearly intended us to be in charge or to have jurisdiction over the product, and that the machine is yours, and you're saying, "No, that's a hot potato. We don't want it." Now that's where our problem is, and you are very clearly saying—and USDA has researched this, and you feel very strongly that you guys are correct—that you do not have jurisdiction once it's inside that restaurant or that feeding establishment.

Mr. Handley. That's correct.

Mr. Coelho. That's interesting.

Mr. HANDLEY. In my opinion, the manner in which the New Jersey incident—and I wasn't familiar with that until I came here today, by the way——

Mr. COELHO. Neither was I. Let's clear the record.

Mr. HANDLEY. In my opinion that was handled in a very proper manner. The local jurisdiction stepped in. Again, I know that Congress has responsibility here too, but I think we can only do so much, and I think the local jurisdiction stepped in and took some responsibility that they should have taken. That's my own opinion, incidentally.

Mr. COELHO. OK. Jim.

Mr. OLIN. Thank you, Mr. Chairman.

Let me ask another question. You say that the machine is not your jurisdiction because you are not given restaurants and so on to monitor with regard to food. The FDA is. I take it that there is a logic to that division of responsibility but, in your opinion, is it reasonable that the FDA can be passing on the health safeness of eggs that are going through this machine without looking at the machine? I mean, it seems very obvious to me that in any kind of food processing, the machinery that is used has an awful lot to do with the product that's coming out. In your opinion, is that an illogical thing for them to be doing, to be drawing this fine distinction?

Mr. HANDLEY. Well, again, I don't know how they handle their responsibility but it would seem to me, in my opinion, yes, that that would be—we certainly look at the equipment that is inside our egg processing plants, and we carefully inspect all of that.

Mr. OLIN. I guess your conclusion may be the same as——

Mr. HANDLEY. But, as was being pointed out to me by Mr. Walsh, as the chairman stated, they don't have that authority, so I think there we get back to this void that seems to exist in the legislation.

Mr. COELHO. Will the gentleman yield?

Mr. OLIN. I certainly will yield, yes.

Mr. COELHO. Let me ask you, do you have this machine in any of your plants?

Mr. HANDLEY. No.

Mr. COELHO. So that the 800 or whatever machines that are out there, none of them are in any facility that's under your jurisdiction?

Mr. HANDLEY. As far as I know, they are all in the restaurants, bakeries, and other institutions.

Mr. VOLKMER. Will the gentleman yield to me?

Mr. OLIN. Yes, certainly.

Mr. VOLKMER. Let me pursue this just a little bit further. As I read the regulations, your regulations on the egg processing, egg inspection, and so on, it would appear to me that by combining eggshell with egg product, the machine would not be able to be used, in all probability, in an egg processing plant. Is that correct?

Mr. HANDLEY. Yes, because it does not allow for that organoleptic inspection of each individual egg.

Mr. VOLKMER. All right. Now would it be possible for an egg processing facility to—say that they make an application to use this machine in their egg processing plant—for you to run a test on the machine to determine whether or not it would qualify? You have never done it.

Mr. HANDLEY. Well, to date we feel that the act prohibits our permitting that use.

Mr. VOLKMER. Without even testing the machine?

Mr. HANDLEY. That's correct, as long as—I would say as long as we know that that machine does not provide for the individual inspection of each egg by sight and smell, that we would deem it inappropriate.

Mr. COELHO. Would the gentleman yield?

Mr. VOLKMER. Yes.

Mr. COELHO. Would you yield?

Mr. OLIN. Certainly, yes, I would yield.

Mr. COELHO. You said that under the act, you feel that it would be inappropriate to use this machine. Is that what you're saying?

Mr. HANDLEY. Yes; the act calls—in our plants the act calls for individual inspection of each egg by sight and smell.

Mr. COELHO. So you are, in effect, saying that under your jurisdiction, in the facilities that are under the control of USDA, this machine would not be allowed.

Mr. HANDLEY. Not for breaking eggs.

Mr. COELHO. Well, that's all it does, isn't it?

Mr. HANDLEY. Yes.

Mr. COELHO. I don't know what the machine does, but it——

Mr. HANDLEY. Well, they use centrifuge machines for other things, I am told, but not for the breaking of eggs.

Mr. COELHO. OK, so if this machine is an egg breaker, in effect, it would not be allowed for egg-breaking purposes in any facility under your jurisdiction.

Mr. HANDLEY. That's correct.

Mr. COELHO. Now can you tell us why that's the case? I know what you just said, but is there a reason, a health reason that you're concerned about?

Mr. HANDLEY. I don't have the history of it.

Well, again, Mr. Kennett informs me that the reasons were to provide for that type of inspection, sight and smell.

Mr. COELHO. But, I mean, why would you state such? Because you are concerned about health? He is saying yes. He is shaking his head yes. Can you say yes for the record?

Mr. HANDLEY. I assume that was the reason for that. Is that correct? Yes.

Mr. COELHO. Is that a yes?

Mr. HANDLEY. Yes.

Mr. COELHO. Yes. All right.

The gentleman from Virginia can have 4 extra minutes, being that we took it all up.

Mr. OLIN. Thank you, Mr. Chairman, if I could reclaim my time and take a little bit more.

On this subject of the divided jurisdiction, would it be practical for USDA to be assigned jurisdiction for the inspection of eggs wherever broken commercially, including restaurants? Would that be a practical thing, or is it totally impractical?

Mr. HANDLEY. It seemed impractical at the time the legislation was adopted, and I think that's the reason why there was a division of authority given to HHS and USDA.

Mr. OLIN. I would take it that that's your understanding?

Mr. **Handley**. Yes, sir.

Mr. **Olin**. This is, I suppose, because the FDA inspects all kinds of food at these locations, and it would be impractical to double the forces. Would it be practical for assignment of jurisdiction with regard to food processing machinery in this particular case to the USDA broadly, for any application with regard to eggs, let's say?

Mr. **Handley**. I would have to refer to my experts here because I am not as familiar with the actual inspection procedures as I should be.

Connor, would you care to address that?

Mr. **Kennett**. We have the technical knowledge to evaluate egg equipment, not all equipment that could be used in institutions, but we have the technical knowledge. We can't see, under the authority of the act, where we have any authority under section 6 of the act to approve——

Mr. **Olin**. I know that. I was just asking, would it be practical to give you authority with regard to the machinery that breaks eggs?

Mr. **Kennett**. I don't have any idea how many different machines are used in restaurants, bakeries, and all, to break eggs. I mean, you could get to a workload problem. The technology we would have. Whether it's practical or not, I don't know.

Mr. **Olin**. This assignment of authority would give you then also the responsibility of determining whether such machinery was safe to use or not. It wouldn't be a very complicated subject that you would be given. You would have to determine that. Once you determine it, you would either authorize the machinery or you wouldn't. Then the question would be, you would have some responsibility to—if the machine was acceptable—to regulate the use of it, inspect it once in a while, and so on. Would that be an illogical thing for us to do, to assign you that?

Mr. **Handley**. I would say right now that we wouldn't be too sure. As Connor stated, we are not sure how much workload this might entail and whether—and how practical it becomes.

Mr. **Coelho**. Would the gentleman yield?

Mr. **Olin**. I certainly would yield.

Mr. **Coelho**. That's an interesting comment, Jim. I have never known an agency to answer a question because of workload. I mean, I think the question really is, if I understand your colleague there, you do have the technical ability to do this, and you do it, I guess, in other circumstances. Is that true?

Mr. **Handley**. We do it in our plants. Yes, sir.

Mr. **Coelho**. OK, so you do do it. You have the technical ability, and nobody else does it, I guess, in the Government. Is that true? Does any other agency of Government do it, have the technology?

Mr. **Kennett**. Not to my knowledge. They may have the technology. I don't know of anybody else that does it.

Mr. **Coelho**. So you people do do it. You have the technology to do it, and the question is, wouldn't this make sense, being that the FDA says they don't have jurisdiction, wouldn't this make sense to give you that jurisdiction. I mean, that is, I think, the question that the gentleman from Virginia is asking.

Mr. **Olin**. That is the question.

Mr. **Kennett**. I think there are two things involved. One is, can you approve a concept or design of a piece of machinery?

Mr. COELHO. Well, what do you do for other machines? I mean, if you have jurisdiction for other machines, why are you all of a sudden saying that this is something different?

Mr. KENNETT. No. I'm trying to explain, is it practical. I think that was the question. It is practical, probably, to look at a piece of machinery and tell whether it is designed properly, in our opinion, to perform the function it is supposed to perform, whether it can be cleaned and so forth or whether it will contaminate something. This is what we do in official plants under our jurisdiction.

Now once that machine is on the market, you're getting into a different practicality. How do you get into all the restaurants and bakeries to see how it's used? This is where I am saying, yes, we have the technical knowledge just to look at a piece of machinery—well, egg equipment, don't get into anything else, egg equipment—and say yes, but how it is used in these thousands of restaurants and bakeries, I think you are talking about maybe—and also it would be duplicating other regulatory agencies' activities in those restaurants.

Mr. OLIN. If I could reclaim my time, Mr. Chairman, I think the gentleman makes a good point, that he could qualify the machine but it still depends on how somebody is going to use the machine, and it has got to be looked at, and so our real problem here—the next problem we have—is with the FDA, to find out why they don't think that's part of their job.

I yield back any time that I have left.

Mr. COELHO. I thank the gentleman.

If I can just follow up with that, in the conclusion from the county government they say, "This conclusion is based on the following two factors"—you heard me earlier say this—"the commingling of egg product and eggshell." That's one. OK? But this is the one that I come right to you on: "the inability of this machine to be properly cleaned and sanitized under normal operating conditions."

Now from what you said just a minute ago, you would have the ability to make that determination. That's their accusation here, which is a rather strong accusation, but you would have the ability to make that determination. You have never made that determination, as far as this machine is concerned.

Mr. KENNETT. AMS, to my knowledge, has never examined this machine for its acceptability for use.

Mr. COELHO. Jim, let me ask you, If this subcommittee were to ask the Department to do such an analysis, would you have the ability to do it or the jurisdiction to do it, or how would we go about it if that is what we decide we want to have done?

Mr. HANDLEY. Well, the ability I think Mr. Kennett has indicated we do have. However, the jurisdiction to do it, I think that is, of course, the question.

Mr. COELHO. OK. Can you check that out and get back to the subcommittee?

Mr. HANDLEY. Sure.

Mr. COELHO. Would you let me know? You know, go home and have your turkey, and then after that we'll be back, so if you'll let us know when we get back, then——

Mr. HANDLEY. All right.

[The information follows:]

DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20250

April 21, 1986

Honorable Tony Coelho
Chairman, Subcommittee on Livestock,
  Dairy, and Poultry
Committee on Agriculture
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Thank you for your March 13, 1986, letter concerning the November 1985 hearing before the Livestock, Dairy, and Poultry Subcommittee of the Committee on Agriculture on the centrifuge egg breaker.

You have asked whether the United States Department of Agriculture has both the authority and the ability to analyze the safety of mass egg-breaking machines. As Mr. Handley testified at the hearing, the Egg Products Inspection Act (EPIA) gives this Department jurisdiction to prescribe regulations governing the facilities and equipment at official plants processing eggs under continuous USDA inspection. Our jurisdiction is limited. We do not have general jurisdiction over egg-breaking equipment or the authority to review or analyze the safety of such equipment for all uses.

In our view, mass egg-breaking machines can be designed to be cleaned easily and sanitized. Nonetheless, we have prohibited the use of such equipment in official egg processing plants because the machines do not satisfy the necessary preconditions for adequate inspection of egg products under the EPIA.

There are two principal reasons for this prohibition. First, the wholesomeness of each individual egg must be determined by organoleptic (sight and smell) inspection before each egg may be added to a tank or churn. Mass egg-breaking techniques do not allow for organoleptic inspection, and as a result, the liquid from unwholesome eggs can be mixed with the liquid from wholesome eggs and go undetected in the final product. Even after grading, about 1 percent of Grades AA and A eggs are leakers, loss, and dirties when delivered to their destination. Therefore, without egg-by-egg inspection after breaking, the possibility for contamination of the egg product exists even if eggs of the highest grade are used. Second, centrifuge egg breaking allows the egg shell and egg membrane to commingle with the egg liquid. It has been determined that this commingling may result in contamination because egg shells serve as a natural harbor for Salmonella and other pathogenic bacteria. Studies have shown that even when eggs are washed and sanitized, bacteria may still exist in the shell. The egg liquid could become contaminated when it commingles with the broken egg shells in the centrifuge.

You have also asked for our response to the legal opinion rendered by the American Law Division of the Congressional Research Service on the issue of the USDA's authority to regulate mass egg-breaking equipment. We must respectfully disagree with that opinion. It is our view that the EPIA does not grant authority to the Secretary of Agriculture to promulgate regulations with respect to sanitation, processing conditions, or equipment in food manufacturing establishments, institutions, or restaurants that use Grade B or better eggs.

Section 5(a) of the EPIA (21 U.S.C. § 1034(a)) requires the USDA to conduct continuous inspection of egg processing plants unless a plant is exempted from inspection pursuant to section 15(a)(1) of the EPIA (21 U.S.C. § 1044(a)(1)). Section 5(a) provides that any food manufacturing establishment, institution, or restaurant which does not meet the exemption requirements of section 15(a)(1), that is, a business which does not use Consumer Grade B eggs or better, shall be deemed to be a plant processing egg products and thus subject to continuous inspection.

The intent of sections 5(a) and 15(a)(1) is clear. Food manufacturing establishments, institutions, and restaurants would not be required to have continuous inspection, provided such businesses used Consumer Grade B eggs or better. This conclusion is also evident from the following segment of the legislative history set forth on page 3 of the opinion of the Congressional Research Service.

> Bakeries, other food manufacturers, institutions, and restaurants which process egg products incidental to the preparation of other articles of human food would not be required to have continuous inspection if they use only eggs meeting consumer grades. The Food and Drug Administration would be responsible for enforcement of the law at such establishments. If such establishments elected to break ungraded or poor quality eggs, they would be considered in the same category as egg products processing plants and would have to come under continuous Federal inspection where proper segregation and processing of eggs could be made. H.R. Rep. No. 91-1670, 91st Cong., 2d Sess., reprinted in 1970 U.S. Code Cong. & Ad. News 5242, 5245.

In aid of the statutory mandate to provide a system of continuous inspection, section 6 of the EPIA (21 U.S.C. § 1035) gives the Department authority to prescribe appropriate sanitary practices and to issue regulations governing the premises, facilities, and equipment at egg processing plants. However, that authority is specifically limited to official plants. An official plant is any egg processing plant which pursuant to the EPIA is subject to continuous USDA inspection. Since the statutory scheme envisions that food manufacturing establishments and restaurants will not generally be subject to continuous inspection and thus will not be classified as official plants, the Department in our view lacks the authority to prescribe by regulation the type of equipment to be utilized by such businesses or to prohibit the use of equipment in their operations.

The Congressional Research Service's opinion relies heavily on section 14 of the EPIA (21 U.S.C. § 1043) which authorizes the Department to issue rules necessary to carry out the purposes or provisions of this Act. It is our view, however, that this general rulemaking authority must be exercised in a manner consistent with the specific provisions of the Act. Thus, this authority cannot be used to supplant and expand the authority conferred by section 6 which confines the Department's jurisdiction over egg processing equipment to that equipment utilized in official plants.

We regret that the Subcommittee did not receive the documents pertinent to the decisions of the Agricultural Marketing Service and the Food Safety and Inspection Service concerning the egg breaking machine. Enclosed are a copy of Mr. Handley's December 2, 1985, letter and copies of the requested documents and related correspondence.

Sincerely,

Alan T. Tracy
Acting Assistant Secretary
Marketing and Inspection Services

Enclosures

Mr. Bedell. Will the gentleman yield?

Mr. Coelho. The gentleman may have his own time. Wait a minute. Yes, go ahead, and then I will yield to my colleague over here from Kentucky.

Mr. Bedell. Just very shortly, I don't think jurisdiction is an issue if we, as a committee of the Congress of the United States, ask you to do something.

Mr. Coelho. No, I think the question here, what I am asking, we could legislate it, of course, and then they would have jurisdiction. The question really is, can we in effect under the law ask you to do it? Is there some prohibition? That's all I want to know. I would not think so, but I would like them to check it and make sure that we're not doing something that then the maker of the machine would sue the Department or whatever because you don't have the jurisdiction to be doing it. I just think we should, if this is what we want to do—I'm not saying that we do—if this is what we want to do, we want to just make sure that we're not getting in any legal difficulty as a result of that.

Mr. Kennett. Mr. Chairman, let me clarify one thing.

Mr. Coelho. Sure.

Mr. Kennett. I don't want to mislead anybody. There are pieces of machines that we can approve as being sanitarily designed and all, but cannot be used in a plant because they won't perform as intended——

Mr. Coelho. We understand that.

Mr. Kennett. I think Mr. Handley's testimony alluded to that.

Mr. Coelho. We understand that.

Mr. Kennett. I just wanted to clarify that, though.

Mr. Coelho. The gentleman from Kentucky, Mr. Hopkins.

Mr. Hopkins. My time is starting just right now, Mr. Chairman?

Mr. Coelho. Yes.

Mr. Hopkins. Thank you.

Mr. Chairman and gentlemen, I have no position on this issue, and I think that is true of my colleagues on this subcommittee. To my knowledge, nobody has really come down one way or the other on this issue. I want to do what is in the best interests of the health of the people who use this piece of equipment. We are looking for advice from experts. It is very much like a road map. If you don't know how to get from one point to the other, you look at a map. Somebody supposedly who has been there before you and has traveled that way might be able to help you to get there.

That's what we are looking for today from the U.S. Department of Agriculture. I am having some difficulty finding out whether I am using the same map that perhaps you all have used.

Mr. Handley, you are the Administrator of the Agricultural Marketing Service, and on July 30 you appeared before the Committee on Agriculture and told that committee that the U.S. Department of Agriculture supports enactment of legislation which would prohibit the use of centrifuge egg breaking in bakeries, restaurants, and similar establishments. I am looking at the transcript of that testimony right now.

On October 4 the U.S. Department of Agriculture sent a letter to Representative Lindsay Thomas reaffirming the Department's support for that legislation. In early October the Department of Agriculture sent a statement to 17 food scientists and food industry experts, stating that USDA supported that legislation, and that cover letter was signed by you, Mr. Handley.

Now can I assume by this road map that if legislation was introduced as a freestanding bill, that the Department of Agriculture would support its enactment?

Mr. **Handley**. A freestanding bill to——

Mr. **Hopkins**. To ban the use of this machine or this equipment.

Mr. **Handley**. Yes, we remain in—that's sort of what the original bill stated, as I recall. Yes, we——

Mr. **Hopkins**. So if a bill was introduced to ban the use of this equipment, you would support that. Is that correct?

Mr. **Handley**. Again, we think that that is the Food and Drug Administration's jurisdiction.

Mr. **Hopkins**. But they are not here, Mr. Handley. You are here, and you are the expert. You are the Administrator. Would you or would you not support that legislation?

Mr. **Handley**. We can't speak for another agency.

Mr. **Hopkins**. I am not asking you to speak for another agency. I am asking you to speak for you. Would you, Mr. Handley, the Administrator, support it or not support it?

Mr. **Handley**. I would defer to the Food and Drug Administration.

Mr. **Hopkins**. You didn't defer to them before.

Mr. **Handley**. I was in error.

Mr. **Hopkins**. That was in error?

Mr. **Handley**. I was in error. Yes, I was.

Mr. **Hopkins**. Good.

Mr. **Coelho**. Would the gentleman yield?

Mr. **Hopkins**. Yes, I will be delighted to yield.

Mr. **Coelho**. Let me ask you, Jim, did you not take a position that, when the amendment was offered on the floor, that you supported the banning of this piece of equipment? That was USDA's position. Are you backing off of that position now? You people had trouble. You waffled a bit but, as I understand, basically when you take all the waffling out that you were opposed to the machine, that you basically supported the committee position. Are you now saying that you are waffling again, or where are you?

Mr. **Handley**. We certainly don't deny that we did waffle on this, and our last statement is our current position. That is that we do support the banning of this equipment or not using this equipment in the plants that are under our supervision. However, for those plants where we have no jurisdiction, we feel it is proper to defer to——

Mr. **Coelho**. But you supported—let me just back you up. I want to ask you a specific question. I want a specific answer, and I don't want you to qualify it if you can. I am just asking, we offered the amendment to ban the machine; you supported it.

Mr. **Handley**. In testimony, yes, I did, and I——

Mr. **Coelho**. OK. Now let me ask you: You supported it then. Do you still support that amendment today?

Mr. **Handley**. With the qualifier that we——

Mr. **Coelho**. So you are waffling now.

Mr. **Handley**. We do not—we can't support it in something that is not under our authority. We feel it's inappropriate.

Mr. **Coelho**. The amendment, Jim, was to ban it. It didn't say under your authority or somebody else's authority.

It was to ban it. You supported the amendment before, even though it didn't have a qualifier. Do you support the amendment today? I think that's all the gentleman is asking.

Mr. **Handley**. No; the answer would have to be no.

Mr. **Coelho**. So you have changed your position?

Mr. **Handley**. Well, if that is—yes.

Mr. **Coelho**. That's all we were asking.

Mr. **Hopkins**. Mr. Chairman, could I have an additional 1 minute?

Mr. **Coelho**. Yes, you may.

Mr. **Hopkins**. Mr. Handley, let me make sure that I'm clear, now, for the record, because I know that the USDA has gone back and forth five or six times on this issue. You are saying, on record, before this subcommittee, that you would—if it were up to you solely, based on the information that you have—ban the use of this equipment. Yes or no?

Mr. **Handley**. Only in our plants.

Mr. **Hopkins**. Yes, would be the answer.

Mr. **Handley**. In plants under our supervision, yes.

Mr. **Hopkins**. Yes; does the Department of Agriculture consider the centrifugal breaking of eggs a safe food manufacturing process? Yes or no.

Mr. **Handley**. We have concerns about it, yes, and we have stated those concerns about the commingling of the liquid with the shell.

Mr. **Hopkins**. That's all I have, Mr. Chairman. Thank you very much.

Mr. **Coelho**. The gentleman from Iowa.

Mr. **Bedell**. Thank you, Mr. Chairman.

First of all, I think it is important that I clarify my position. I did participate in the floor debate, and I felt that it was improper for us as legislators to legislate someone out of business until we knew what we were doing. I think it's pretty clear we don't have adequate information. The Department of Agriculture officials don't even know what they are doing, as near as I can tell. At least they testify one thing one time and another thing another time.

Mr. **Coelho**. As Mr. Hopkins said, they are supposed to be our road map, but I'm not sure.

Mr. **Bedell**. But I want it clearly understood that I'm not here to try to either support or oppose a machine. I'm trying to learn what should be done. It has always been my contention that we should have people in the regulatory agencies who can make these technical decisions, without being influenced as much by political considerations, and that these decisions should be made by them. I am learning that apparently none of them want to take responsibility for this issue. We have to either make them take responsibility or we have to take responsibility.

I guess the concern I have is, if we take responsibility, the issue is more likely to become political. Mr. Reid, who has casinos that use the machine, is going to support it and Mr. Badham, who has the manufacturer in his district, is going to support it. Those who have egg breakers in their districts are going to oppose it. I do not think that's the way we ought to work. I think we ought to do what is in the best interest of our country.

You made a few statements that concern me a little bit. I guess first of all I need to know, what does "organoleptic" mean?

Mr. Handley. That means by sight and smell.

Mr. Bedell. In your processes, is each egg broken individually and individually inspected by an inspector?

Mr. Handley. Yes, sir.

Mr. Bedell. And that doesn't happen, then, as this machine is used in these restaurants. Is that correct? When they use this machine, we don't have similar inspection. Is that correct?

Mr. Handley. That's correct.

Mr. Kennett. That's correct. In our plants under our jurisdiction each egg is individually broken and inspected, but the individual egg itself is inspected by a company-trained employee, not our USDA inspector.

Mr. Bedell. I understand.

Mr. Kennett. He oversees the whole inspection procedure.

Mr. Handley. But we are responsible for——

Mr. Coelho. Will the gentleman yield? I mean, that's normal. That's normal procedure for all inspection.

Mr. Bedell. But my understanding is that when this is used in a restaurant, then it bypasses inspection. Is that correct?

Mr. Handley. That's correct.

Mr. Bedell. I think that's important for us to know. Further, if I understand it, even with grade A and B eggs there are at least some of those eggs which would be thrown out under your inspection system. Is that correct?

Mr. Handley. Potentially, yes. According to our studies, about 1 percent.

Mr. Bedell. One percent of them under that.

Finally, you said in your prepared statement that last year, in your tests, 138 samples showed salmonella. Were those eggs that had gone through these egg-breaking plants that you inspect, and how did they become contaminated, because I thought that there was a requirement that they had to be pasteurized.

Mr. Kennett. Let me try to address that. Eliminating salmonella totally, unfortunately we have found to be impossible to date with the technology we have, so we try everything possible to reduce the risk. Now of all the samples taken—and we have it all pasteurized, we have a lot of requirements we put on plants—and about one-quarter to one-half percent of all the product we test, after it has gone through all this process, we still find a salmonella-positive product which has to be reprocessed and redone.

Mr. Bedell. Even after it has been pasteurized?

Mr. Kennett. That's right. That's correct.

Mr. Bedell. Do you check all of it or only part of it?

Mr. Kennett. We sample, we check only part of it, based on the history of the plant. If you get a salmonella positive, then your testing would increase. If you run good for a long while, testing decreases.

Mr. **Bedell**. Suppose you found salmonella in a test in a plant. Would you then simply increase the testing, or would you test 100 percent?

Mr. **Kennett**. We wouldn't test 100 percent. We would increase the testing, and also you would go back and check operations closely. Is it anything I'm missing? Is it something that has gone awry? Is the air filter system wrong? Is something wrong?

Mr. **Bedell**. Isn't it therefore logical to assume that at least some of the product that is coming from your plants does indeed contain salmonella, and that you're not catching 100 percent of all of the product that is coming from those plants?

Mr. **Kennett**. I think that's correct. It probably could be. What percent, I don't know. It would be very small, but I don't know.

Mr. **Bedell**. I have one last question. It is said that cooking will kill the salmonella, and I think it has also been said that lots of times if you get scrambled eggs, you get some of them that are completely cooked and you get some of them that appear to be partially raw. Is that cooking sufficient so that, even in the scrambled eggs that are nearly liquid, the cooking would kill salmonella?

Mr. **Kennett**. If that scrambled egg is lightly scrambled and it does not reach and maintain 140° for 3½ minutes, it will not kill the salmonella.

Mr. **Bedell**. But that's not my question.

Mr. **Kennett**. But I don't know how long they are cooked.

Mr. **Bedell**. You don't know, if you go to a restaurant and you get eggs on which there is liquid egg among the scrambled eggs, you don't know whether that would necessarily mean that there was a possibility of there being salmonella in that liquid.

Mr. **Kennett**. If it's liquid, there would be a possibility that salmonella would not have been killed, had any been there.

Mr. **Bedell**. OK.

Mr. **Coelho**. Thank you.

The gentleman from Minnesota, Mr. Stangeland.

Mr. **Stangeland**. Thank you, Mr. Chairman. There are a few things that I need cleared up and maybe, because I have missed some of the testimony, the chairman might even want to help clear these things up for me.

I gather there is a problem and a concern as far as inspection practices in bakeries and restaurants, in that USDA does not have jurisdiction and FDA says they do not have jurisdiction, as well?

Mr. **Coelho**. Let me just tell you, where I—and correct me, Jim, if I am wrong—where I understand the gap is, is that USDA says that in those plants under their jurisdiction they have authority to inspect and approve machines, and so forth and so on, so there is no question on those. When it moves away from those facilities to restaurants and other eating establishments, FDA has jurisdiction, they say, over the product, but claim they do not have jurisdiction over the machine. So what we have is that missing gap of, not product—we have product all the way through—but we have the missing gap of the machine from their facility on, and I think that is correct. Am I right, Jim? I think that is an accurate summation.

Mr. **Handley**. Yes, that's exactly right.

Mr. **Stangeland**. What happens, then, if the FDA finds that the product is bad?

Mr. Coelho. If they find the product is bad, I don't know. Do you know what——

Mr. Handley. As I understand it, if they find the product to be bad, then we go back and check the source of where the eggs came from. If it is determined that the egg product itself was involved in the contamination or whatever, then we go back to the people who ship the eggs——

Mr. Coelho. Just a minute. If the gentleman would yield, let me just follow through. You weren't here when Matt Rinaldo testified. Matt said that in Atlantic County, NJ, on October 24 or 25 or something, that there were some cases of salmonella poisoning. The county provided us a document which says that they claim that that machine is what caused it because that machine cannot be cleaned properly.

Mr. Stangeland. I heard that.

Mr. Coelho. OK, so that's where we are.

Now if I can just ask you, if the county were to ask FDA, and FDA then were to say they don't have jurisdiction over the machine and were to ask you, as a result of this case, could you then come and look into this machine as a result of that?

Mr. Kennett. You are asking could we——

Mr. Coelho. I think Arlan's question here—Arlan has, I think, hit on an interesting point. If you, in effect, are saying that you don't have jurisdiction, and FDA doesn't have jurisdiction over this, but say the county said, "Here is this contamination. This product is contaminated. It has caused these people to get sick. They are in the hospital." The county goes to FDA. FDA says they don't have jurisdiction, but they go to you. Would you then be able to do something.

Mr. Handley. Well, I would like Connor to maybe deal with the technical. I think FDA at that point does have the authority to stop the product at that point and then assess the problem. If it is determined then that it had something to do with the egg, then I think the eggs—we go back to the people who ship the eggs to the processor. It is a backtracking.

Mr. Stangeland. But you can go back and check the producer who ships the eggs, then, to a restaurant?

Mr. Handley. That's correct. Theoretically, Congressman, those are supposed to be grade B or better eggs to go into that——

Mr. Stangeland. I understand that. That is going to be my next line of questioning. What determines what is a grade A egg, a grade B egg, and a lesser than grade B egg?

Mr. Handley. I'll have to ask Mr. Kennett to respond to that.

Mr. Kennett. The egg grades are determined by the shell conditions outside and the interior of the egg. Most of the undergrade eggs are due to the condition of the shell, a little stain or misshapen, as opposed to the interior egg quality, but on the interior, a grade A egg, for example, will have a thick white, an upstanding yolk. A grade B will have a thin white and the yolk will not be as upstanding. For baking, cooking, they are the same quality. I mean, one is just——

Mr. Stangeland. So the major difference between A and B is the interior of the egg, not the exterior?

Mr. **Kennett**. Insofar as—no, it's both, it's both—but insofar as their functional use, a B egg interior is just as good as an A grade for cooking or making a cake. There is no functional difference.

Mr. **Stangeland**. What percent of the eggs that you crack in your processing plants that you inspect, crack A, crack B, and crack lesser than B? What percent of each category, about?

Mr. **Kennett**. I would have no idea, sir. I have no idea what they would be. It would vary from plant to plant. I would address it this way, though, to give you some feel of what we do in a plant.

When we get in a plant, the eggs are candled, in normal, in general operation, and the eggs that are not allowed to be broken, like leakers, rotten eggs—there is a category—dirty eggs, they are removed. The remaining eggs, the remaining eggs go through a washing and sanitizing operation, and then they are individually broken. Now what the exact quality of those remaining eggs are, I don't know, other than they would be say grade B or better, except for checks. They can have more checks in them—cracked eggs, that is—than we allow in grade B. Grade B can have 10 percent. You could theoretically break 100 percent checked eggs, if they were not leaking, if they had been washed and sanitized and were clean.

Mr. **Stangeland**. Who does the grading, the producer himself?

Mr. **Kennett**. In official plants.

Mr. **Stangeland**. Well, I am a big egg producer here and I sell 1,000 dozen eggs a day. Who grades my eggs to be sure which are A's, which are B's, and which are less——

Mr. **Kennett**. The majority are graded by the producer. There are about 10 percent of the plants, that grade about 40 percent of the eggs, that use our USDA voluntary service. They pay for it, and we certify as to the grade. There are some 2,200, 2,300 egg packing plants. About 225 of them use our grading service. The rest of them the producers grade, but there are State egg laws that require these eggs to meet the grade as stated by the producer. In other words, when you see "Grade A Large" there is a State law that says, "Mr. Producer, you should pack in accordance with that standard." If you see "USDA Grade A Large," then we have certified to it.

Mr. **Stangeland**. So in all of this inspection procedure that we are talking about, in that missing gap there is some inspection in there done by a municipal health department that licenses a restaurant, a county health department, or a State department of health, and also State departments of agriculture that are getting involved in this as well. So we probably, while we have a gap on the Federal level, that gap is filled in between in most cases. Is that a true statement?

Mr. **Kennett**. That is correct.

Mr. **Bedell**. Would the gentleman yield?

Mr. **Stangeland**. Yes, I would be happy to yield.

Mr. **Bedell**. Very quickly, if I were to invent a machine that could take cornstalks and convert them into marijuana or something similar, is there anybody in the Government that has authority to say that I couldn't go ahead and sell that machine to whomever I wanted to?

Mr. **Coelho**. Well, I don't think that is the issue. You're right, I don't think there is, but the issue here I think—and the only reason that we are in it—is because we passed a law that said, in effect, that USDA shall have jurisdiction in these particular cases because of the public concern about health in regard to eggs. So the Congress is already into this, and I think that most people felt when we passed that law that we were filling in a gap, that FDA had jurisdiction except for USDA activities, and so we passed the law to make sure that that gap was filled and so we covered it.

Now what we are finding—and I find this very hard to believe—is that we have a situation where there are two public agencies quarreling over who does or does not have jurisdiction and, in effect, saying that a gap does exist. I don't think that we legislate gaps. That's just not the way we operate. We thought we covered it before. But I think that the difference here, Berk, is that we have already established, the Congress has already established that we need to be involved in this area. Whether it is right or wrong, I don't know, but we have already established that. We would not be involved in a cornstalk machine or a marijuana machine.

Mr. BEDELL. But that's not my point. My point is that surely we ought to have some regulations within the Government that control machinery, if that machinery is going to cause problems within our society.

Mr. COELHO. That's right, and particularly when we have felt already that this is an area we need to be involved in. I think you are absolutely right.

The gentleman from Missouri, Mr. Volkmer.

Mr. VOLKMER. Thank you, Mr. Chairman.

I would just like to continue on that from a personal viewpoint, Mr. Handley, and I can understand your position as being earlier this summer in favor of the amendment of the gentleman from Georgia and now, because of FDA's question of jurisdiction—because I don't know whether FDA is saying they really have jurisdiction or not, and that is where we are in a quandary. You say, "We don't have it." The FDA says, "Well, we really don't have it," so nobody has it. There is a void.

I am sure that, as you have listened to the members here, you see some concern by the members as to the utilization or the use, in other words, of this machine in the food industry, and that somewhere along the line I think for sure that it ought to at least be tested. You know, let's determine whether or not there are health hazards as a result of it. I personally feel that if you all come back and say, "Well, we really don't have jurisdiction, and we have no basis on which to test it or anything," I think that this subcommittee should have legislation drafted to not authorize it but require it.

I think there is a sufficient number of allegations in regard to it. The fact that you do not permit the commingling of eggshell with egg yolk and egg white in manufacturing, that gives me concern right there when I see here a machine that does that. If you don't permit it because of health reasons in the egg processing plants, then how can it be done in other instances and still be healthful? That's what gives me a concern. I can't see the logic. Logic would tell me that, hey, if it's bad one way, it's bad the other way. Do you understand?

Mr. HANDLEY. I do understand that, yes. We certainly don't deny that there is an issue here, and certainly in the last 3 or 4 months we have become knowledgeable just how much interest there is in it.

Mr. VOLKMER. Can you understand the frustrations of Members of Congress——

Mr. HANDLEY. Oh, absolutely.

Mr. VOLKMER. When the bureaucracy comes to us and says, "Hey, we don't have jurisdiction, and we don't have jurisdiction, and there is a void," and so you go on and use this machine anyway, anybody that wants to, anyhow you want to use it.

Mr. HANDLEY. Sure. I can understand it. I mean, we agree that there is a void, if you will.

Mr. VOLKMER. All right. Thank you very much, Mr. Chairman.

Mr. COELHO. If I can just follow the gentleman's point, I think that the concern that we have—I mean, I wasn't as hyped up on this issue until I come here today and I find that people are hospitalized. Now my concern is escalated dramatically over what it was before. I was basically providing a hearing for people that wanted this thing cleared up, but it is no longer something I am doing for somebody else. I think that this committee has an obligation now to clear this up as a result of the hospitalization and the allegations that have been made, and I would think that USDA has some responsibility to clear this up as much as possible also.

So when I first asked you to come up, we were asking you to give all the answers. Of course you haven't, but I appreciate very much, Jim, your testimony and that of your colleagues. We would hope that you will come back to us with the question that we asked, and if you can talk—and as someone who is a staffer for 14 years, I know that you people know people at FDA and so forth—if you could talk quietly to some of these people over there, and if you can find out what is happening, I would appreciate it if you would let us know. I mean, something has got to happen and we have got to get some control over this thing.

Mr. Lewis, did you want to ask any questions?

Mr. LEWIS. No questions, Mr. Chairman.

Mr. COELHO. Thank you very much, Jim.

Mr. HANDLEY. Thank you, Mr. Chairman.

Mr. COELHO. I appreciate your being here.

I might announce to the witnesses that we do not intend to break for lunch. We intend to go right through, so those of you that are hungry and you are later on the witness list, you better move and get something to eat; those of you that are early on, you will have to wait and eat after you testify.

Mr. HANDLEY. Are we excused, Mr. Chairman?

Mr. COELHO. Yes, you are. Thank you, Jim.

Jim, we would like you to stay around, if possible. Do you mind? There might be some questions that we would like to ask, and you would be the expert witness, if you don't mind.

Mr. HANDLEY. I would be happy to.

Mr. COELHO. The first panel that we have is Mr. Mike Maynard, owner of Egg King in Tustin, CA; Mr. Joe Murphy, attorney for Egg King, Newport Beach; Mr. Wayne Gable, director of trade policy, Citizens for a Sound Economy, Washington, DC; and Mr.

Tim Luberski, owner of Hidden Villa Ranch in Placentia, CA. Thank you very much. If you will all come up and take your seats, we will be happy to hear from Mr. Maynard.

Mr. Maynard, you may proceed. Are you the owner of the machine? Is that what my staff is telling me here?

Mr. MAYNARD. That's correct.

Mr. COELHO. That's correct? Well, welcome to the hearing. I'm sorry that we meet under these circumstances, but welcome to the hearing. You may proceed. We understand that you want to demonstrate the machine and you also have a video. We recognize the time constraints. We would be happy to give you a little leeway but not much.

Mr. MAYNARD. Thank you. I appreciate that.

Mr. COELHO. You may proceed.

STATEMENT OF MICHAEL E. MAYNARD, OWNER, MiSa MANUFACTURING, INC.

Mr. MAYNARD. For the record, my name is Michael Maynard. I am pleased to have the opportunity to be able to appear before this subcommittee today. I would like to submit my statement and the accompanying documents for the record. I would like to brief them, because of the time limit, and also be able to demonstrate the machine.

I would like to stand on the fact that I have over 800 machines in operation. They have been in operation in excess of 5 years. We are, at the present time, breaking in excess of 1 million eggs per day throughout the United States. To my knowledge, there has never been one documented case attributed directly to the use of my machine, of any type of salmonella or any other bacteria.

The machine is used in places like Disneyland, Disney World, hotels and casinos in the major gambling centers of our country. The machine is used in military bases. It is purchased under GSA contract. We have a machine here in Washington at the Pentagon. Disney World and Disneyland break thousands upon thousands of eggs a day. Disneyland alone has seven restaurants and more than 200,000 square feet of banquet space, and again, not one case of proven salmonella directed toward my machine.

The machine was manufactured and designed to be of ease to clean, to be thoroughly cleanable, which I will demonstrate in just a moment. The machine has been certified by the Bakery Equipment Sanitary Standards Committee. It was tested extensively in the State of Hawaii. It was tested by the U.S. Testing Laboratory for its cleanability, and all of those documents will be on the record.

If I may, I would like to break down the machine, show everyone what it is about, and the ease and ability of cleaning the machine.

There are three pieces to the machine. There is an inside basket. It is constructed of stainless steel. You will notice it is a solid-bottom basket and it is perforated around the edges of the basket.

There is an outer basket also in the machine that is held in by a thumbscrew. It is held into the machine by a thumbscrew, readily removable. The machine is held together, this basket is held together, the stainless steel shell and its aluminum cast base, which is for driving purposes, it is screwed together. It is sealed with an appropriate silicon sealant that is approved by the FDA for food surfaces.

The canister of the machine is also readily removed from the motor base so that, gentlemen, everything that comes in contact with the egg breaks away from the motor base. It will all fit into the smallest, now, the smallest standard commercial dishwashing machine, for ease of cleaning and for sanitation purposes.

When the machine is clean and completely assembled, the operation is very simple. You turn on the machine, put the loading hopper on top of the machine, and you start to put in your eggs. We recognize the fact that it is very important to visually inspect the eggs that go into this machine. Once again, they are only grade B and above eggs which must be washed and must be sanitized before they are sold into commerce.

We do realize that in every aspect of our lives there is a limitation, that nothing can be perfect. These eggs cannot be perfect. We have to recognize that there could be possibly on these eggs something that shouldn't be there. We do furnish with the machine, plastic trays, so that the customer is able to inspect the eggs, both the top and the bottom, for any cracks, any impurities, anything he should find on the shell. They are instructed on the machine, in the service manual that comes with the machine, to visually inspect. We want them to do this. We want them to remove checks, cracks, dirties, anything that they might find.

Once they inspect the top of the egg, they put the plastic flat on it, invert the cardboard carton, remove it, and inspect the bottom of the egg. If they find anything wrong with it, we instruct them to remove it and either destroy it or return it to their supplier for credit.

Once they have done it and the machine is up to speed and ready to operate, it is a matter of taking the eggs—we do not touch them by the human hand. Anyone will tell you the greatest contamination of salmonella is the human being. We transfer it. You put the eggs into the machine. If you will notice, gentlemen, that was 30 eggs. They are separated. They don't blend in the machine. They don't have a mixing vat in the machine. You saw the inside of each basket. It merely breaks it, draws it to the edge of each basket, and extracts the liquid.

The blending in fact takes place between the two perforated baskets. It homogenizes the egg, but it does not destroy it, it does not heat it. There is no friction factor in the machine. If your eggs are pulled from the cold box to go to the machine and they come out at 38°, we have done several tests. Once they are put into the machine, the machine does not raise the temperature 2°.

Again, this would be a continual operation through a case of eggs. A case of eggs means 30 dozen, 12 of these flats. At that time you would have a 5-gallon bucket of liquid.

We address the organoleptic inspection—that is, sight, smell, and feel. Obviously we don't want them to feel it. We don't want them to touch it. We don't want them to touch the shell. The contamination is on your hands. We have just visually inspected this egg product, the top of the egg and the bottom of the egg. If there had been cracks or dirties or whatever, we would have removed that.

Now as to the sense of smell, I am sure that all of you in your days have come across an egg that smelled. Bad eggs and rotten eggs smell, and if we had one here today, we would have just driven everyone out of this room.

When they are finished with a 30-dozen case of eggs, the machine will only hold the shells of the 30 dozen, 360 eggs. When they are finished with that, it is a matter of taking the hopper off, pulling the center basket out, and discarding the shell, removing the bucket and using a new bucket.

So if in fact there was a bad egg—and, gentlemen, I have broken thousands upon thousands upon thousands of eggs in testing, developing, and marketing this machine, and I have yet to find a bad one—but if there was a bad one, we are not talking about throwing away thousands and thousands of dollars of egg liquid. We are talking about throwing away a 5-gallon bucket, but that is not necessarily true, either, because the man who finds the bad egg, all he needs to do is seal that bucket, give it back to his egg supplier, and they will credit it to him.

If you noticed the shell fragments, they are not smashed, they are not ground up. They are large pieces of eggshell. It is a matter of taking it and shaking them out into a container, and starting again and doing another 30 dozen.

We insist that if anyone using this machine uses it for any longer than a 4-hour period, that they are required to stop the machine, break it down completely, wash it, sanitize it, and then go into another operation; or, if they find a bad egg, that procedure is to be followed.

Now I can appreciate the fact that I have 800 machines out there and I have no salmonella problem. Salmonella is a fact of life. If you go into a restaurant and the chef hand-cracks two of your eggs and on the shell of that egg is salmonella, and he picks that up and he cracks your eggs into a frying pan, and reaches over and picks up a piece of toast, he has just contaminated that piece of toast with salmonella. That is a fact.

Thank you very much.

[The prepared statement of Mr. Maynard follows:]

EGG KING
MiSa MFG., INC.
14752 FRANKLIN AVE.
TUSTIN, CA 92680
714/731-5780

November 18, 1985

The Honorable Tony Coelho
U.S. House of Representatives
Chairman, Subcommittee on Livestock,
Dairy and Poultry
Room 1301, Longworth House Office Bldg.
Washington, D.C. 20515

Dear Mr. Chairman:

"THE KEY TO SUCCESS IS TO FIND A NEED AND FILL IT." I have done this. I have designed, developed, tested and marketed a machine for cracking eggs at the point of use, i.e., bakeries, retaurants, hotels, schools, universities, military bases, and other food service establishments. In so doing, I have caught the attention of my competition, the frozen and powdered egg processors and their powerful association, the United Egg Producers (UEP). For that reason, I am before this committee today.

Eggs sold in commerce today are clean and wholesome. The Egg Products Inspection Act of 1970 requires that all eggs sold in commerce must be candled, graded and washed in a sanitizing solution of 200 ppm chlorine, (or other acceptable sanitizer). Any egg found to be unwholesome must be rejected.

The sanitary requirements for egg breaking machines in official plants is set out in the E-3-A Sanitary Standards. These standards were drafted by a group composed of representatives from International Association of Milk, Food and Environmental Sanitarians (IAMFES), United States Department of Agriculture (USDA), Poultry and Egg Institute of America (PEIA), and the Dairy and Food Industries Supply Association (DFISA), and incorporated by USDA in its regulations governing egg products plants, (7 CFR 59).

The preamble to E-3-A Standards reads:

> "It is the purpose of the IAMFES, USDA, PEIA and DFISA in the development of the E-3-A Sanitary Standards Program to allow and encourage full freedom for inventive genius or new developments. Specifications for egg breaking and separating machines which are developed and which so differ in design, material and construction, or otherwise, as not to conform to the following standards, but which, in the fabricator's opinion are equivalent or better, may be submitted for the joint consideration of the IAMFES, USDA, PEIA and DFISA at any time."

Accordingly, I requested approval for the Egg King from FSIS Equipment Branch of the USDA. On June 6, 1983, I was informed that a field test was necessary. This was arranged at the facilities of one of my customer's, Maria and Son of St. Louis, a federally inspected meat and poultry plant. This test was to be for a 30-day period. It in fact lasted 120 days. The field test report was written on October 17, 1983. I received a letter of approval dated October 18, 1983. On March 29, 1984, the approval was rescinded, because of pressure brought to bear by UEP and AMS. This machine was not intended for use in official egg breaking plants. The approval was sought for USDA inspected meat and poultry plants only, under the exception authorized under the E-3-A Standards. Mr. H. Connor Kennett of AMS got involved, and although he has grossly overstepped his authority, he has been backed

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TUSTIN, CA 92680
714/731-5780

by the entire USDA. Privately however, all USDA personnel that I met with, except one, agreed that my machine did not pose a health threat. To this day I remain confused about who heads the Department of Agriculture. Is it John Block or H. Connor Kennett? It's puzzling how Mr. Lett, Mr. Norton, Dr. Houston and Mr. Handley can say they find no objection to the use of the machine to me and my attorney in meetings, yet they always retreat back to Mr. Kennett's position. The policy of the USDA has changed nine times since 1983. I don't approve of this political game-playing (called CYA), and I never will!! Mr. Kennett himself admitted in a letter to Carl Nall, Pacific Egg and Poultry Association, dated 7/5/84, that eggs being broken by the users of my machine are sound, wholesome and pose no health hazard:

> "Perhaps some legislative history is in order to explain our position. When the Egg Products Inspection Act (EPIA) was being debated, a decision was made that liquid, frozen or dried egg product should be manufactured under continuous inspection. It was decided at that time that shell egg plants need not be continuously inspected because unwholesome or potentially dangerous eggs in shell form could be detected at any place or time in the marketing system. Therefore, a spot check (presently once a quarter) of shell egg packers to determine the disposition of their undergrade or restricted eggs would be sufficient inspection to prevent harmful eggs from reaching consumer channels. Checks and dirties (unless cleaned at the packing plant) had to go to egg products plants for proper disposition and processing under continuous inspection; and leakers, loss, inedibles, and incubator rejects had to be destroyed for use as human food. Thus, all eggs sold to consumers, bakeries, restaurants, and other food manufacturing plants would

be clean, have sound shells, and not be a health hazard."

> "The act and regulations limited continuous inspection to the traditional egg breaking and drying plants. It would have been impractical, unnecessary, and too costly to require continuous inspection at every location that breaks clean, sound shell eggs - bakeries, restaurants, and other food manufacturers. But in developing the legislation, regulations and instructions for administering the EPIA, some were farsighted enough to realize this could be a problem. That's why the regulations allow bakeries to only break wholesome eggs for immediate use and prevent them from performing other forms of processing, such as packaging and freezing. We believe our original decision remains sound if adequate enforcement is maintained."

The machine has been in use for over four years and there are now in excess of 800 machines in 38 of the 50 states breaking over 1 million eggs per day with **not one case of salmonella**. The machine is safe; the instructions are being followed; FDA sees no health threat. My customers are united in their desire to buy and break their own fresh shell eggs. THEY DO NOT WANT FROZEN OR POWDERED EGGS.

Congressman Thomas, during the recent floor debate stated that "it was the manufacturer's responsibility to look closely at the regulations before perfecting the machine." In response to his remark, I wish to say that my machine had been tested and approved by USDA, (FSIS) for use in meat and poultry plants (since rescinded), U.S. Testing Company, The Baking Industry Sanitary Standards Committee, and has been extensively tested and approved by the Health Department, State of Hawaii. In addition, I have the support of the National Restaurant

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Association, Retail Bakers of America, The House Travel and Tourism Caucus, Independent Bakers Association, American Hotel and Motel Association, and a host of others, such as:

GWENNIE'S OLD ALASKA RESTAURANT - Ron Eagley:

"The Egg King is a very vital piece of equipment in our kitchen."

THE DESSERT FACTORY - Larry Gonsales, Owner:

"The effort of cracking eggs is now cleaner and more economical."

LITTLE PEPI'S - Philip Schettone:

"The Egg King has been quite a cost, time and labor saver. Cracking the eggs by hand took an average of 5 to 6 hours daily. The Egg King from start to finish, including clean-up, takes only 1-1/2 hours."

CAESARS PALACE - Michael Ty, Executive Chef:

The Egg King has streamlined our egg-cracking efforts with substantial savings in liquid yield, as well as labor. We would recommend this piece of equipment with pleasure."

WYCKOFF QUALITY BAKERY - John Kino:

"Since we switched from frozen eggs to cracking fresh eggs with the Egg King, our danish and cake products really show an increased superior value."

DISNEYLAND HOTEL - Bruno Mella, Executive Chef:

"With more than 30 million dollars a year in food and beverage sales, we cannot afford the waste of cracking eggs by hand. The Egg King saves time; we have a fresher, more consistent product because machine cracking protects the quality of the merchandise. We use an average of 280, 30-dozen cases per week. Our kitchen supplies eight restaurants and more than 200,000 square feet of banquet space."

BRENNER BROS. BAKERY - Joe Brenner, Owner:

The use of fresh eggs is an obvious advantage in cost and quality. As an ingredient it is attractive to the customer. To be able to use fresh eggs is an advantage to the baker if they have the Egg King to make it easier."

The list of satisfied customers goes on and on, as there are hundreds of machines in use.

Mr. Thomas constantly referred to the "Important Instructions" for use of the machine as mere suggestions. During the floor debate, he stated, "they are not laws, they are not statutes, they are merely suggestions by the manufacturer." Mr. Thomas ought to acquaint himself with the law. The FDA and state and local health agencies have ample statutory and regulatory authority to assure that the machine, like any other pieces of equipment in a food service establishment, is used in a safe and sanitary manner. His insinuation that users of the machine cannot be trusted was a blatant attack on the integrity of this country's 400,000+ restaurant, bakery and food service operators.

The Egg King has proven itself, its track record is 100%. Because it takes away frozen egg business, and for no other reason, UEP is fighting to have it outlawed. Competition is what our great nation is built on. Destroying competition through legislation is not the American way. To date I have

EGG KING

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spent well over $100,000 to defend my machine against UEP's unwarranted attack. GENTLEMEN, HOW LONG WILL THE CONGRESS OF THE UNITED STATES OF AMERICA ALLOW THIS TO CONTINUE?

Respectfully,

M E Maynard
MICHAEL E. MAYNARD

MEM:km

(Attachments follow:)

MISA MFG., INC.
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TUSTIN, CA 92680
714/731-5780

September 5, 1985

Worlds Poultry Science Association
President, Dr. M.L. Sunde, Chairman
Poultry Science Dept.
University of Wisconsin
1675 Observatory Dr.
Madison, WI 53706

Dear Mr. Sunde:

I am requesting your help in whatever scientific information there is available on Salmonella Contamination in eggs.

What we are trying to determine specifically is;

A. Where the contamination begins, in the bird or egg or on the shell.

B. If the bird is contaminated, will the egg and/or shell, or both, also be contaminated?

C. If the shell is contaminated, does this also mean the egg meat (yoke & white) will also be contaminated?

D. If the shell is contaminated and the egg meat is not, how long would the shell have to be in contact with the egg meat to also contaminate it?

E. At what temperature does Solmonella grow? What chemical kills Salmonella, and at what strength, or what temperature kills Salmonella?

F. In your opinion, is Salmonella a problem in the consumer market with eggs today? Please explain your answer positive or negative.

If you are able to answer these questions and if there are any reports available on these subjects, I would appreciate receiving them. I thank you very much for your assistance.

Best regards,

MISA MFG., INC.

M. E. Maynard

M. E. Maynard
President

MEM:lb

Poultry Science
Department

University of Wisconsin–Madison
260 Animal Sciences Building
Madison, WI 53706-1284
608-262-1243

September 30, 1985

Mr. M.E. Maynard
President, MiSa Mfg., Inc.
14752 Franklin Avenue
Tustin, CA 92680

Dear Mr. Maynard:

Your Salmonella inquiry of September 5, 1985, to the World's Poultry Science Association, was forwarded to me for a reply.

Enclosed are reprints and copies of information that address the points you raised in your letter. By reading these reports you will probably obtain a more complete picture of Salmonella and its involvement in poultry and eggs. Nevertheless, I will attempt to provide an answer to each of your questions.

A. Salmonella can originate from poultry feed and become established in the chicken's gastrointestinal tract. Consequently, Salmonella may be found on egg shell surfaces due to contact with the feces.

B. If the bird is contaminated, the egg and/or shell will not necessarily be contaminated. In fact, it is not likely that the egg will be contaminated unless the hen contains a very high number of Salmonella.

C. If the shell is contaminated, the egg contents can possibly be contaminated too. Based on research, however, it is not often that the egg contents are contaminated with Salmonella. Very dirty nests and sloppy management practices would make contamination more likely.

D. The egg contents will not necessarily ever be contaminated even if Salmonella is present on the shell. If the numbers are low, proper egg washing is practiced, the shells are kept dry, etc., the egg meat may never contain Salmonella.

E. Salmonella grow best at 95 - 100°F, but grow well at ordinary room temperatures too; they do not grow well at refrigerator temperatures. Salmonella can be killed in liquid egg by pasteurization conditions of 140°F for 3 1/2 minutes. Cooking of foods will also kill Salmonella. Salmonella are most heat resistant at pH 5 to 6. Heat resistance is lower in the presence of acetic and lactic acids than in hydrochloric acid at the same pH. Other bactericidal chemicals like hydrogen peroxide and chlorine are effective against Salmonella.

University of Wisconsin–Madison provides equal opportunities for admission and employment.

Page 2
Mr. M.E. Maynard
September 30, 1985

F. In my opinion, Salmonella in eggs is not a problem in the consumer market today. The enclosed charts copied from the USDA Center for Disease Control Foodborne Disease Surveillance 1981 Annual Summary list eggs as a source of Salmonellosis only a few times. Whenever eggs are implicated, the reason for their involvement may have been due to improper handling/cooking, cross-contamination, and other foods.

I hope this information is helpful to you.

Sincerely,

Arthur J. Maurer, Ph.D.
Professor

AJM/cmr

Enclosures

0436A/9 & 10

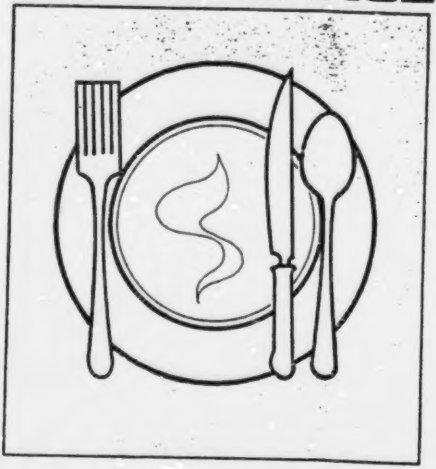
ANNUAL SUMMARY 1981

ISSUED JUNE 1983

CENTERS FOR DISEASE CONTROL

FOODBORNE DISEASE

SURVEILLANCE



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • Public Health Service

E. LISTING OF FOODBORNE DISEASE OUTBREAKS

Etiology	State	Number of Cases	Date of Onset	Lab Data: Patient	Lab Data: Vehicle	Lab Data: Food-Handler	Vehicle	Location Where Food Mishandled and Eaten
BACTERIAL								
Bacillus cereus								
	Connecticut	2	5/15	+	+		Fried rice	Restaurant
	Connecticut	14	9/23		+		Unknown	Restaurant
	Georgia	20	5/13				Unknown	Restaurant
	Massachusetts	9	7/21	+	+		Fried rice	Private home
	New York	14	3/10		+		Other food	Restaurant
	New York	9	5/28	+	+		Fried rice	Other
	Virginia	4	3/16		+		Shellfish	Private home
	Washington	2	7/20		+		Fried rice	Restaurant
Campylobacter jejuni								
	Arizona	190	4/24	+			Milk	Private home
	Arizona	14	10/18	+			Milk	Camp
	Kansas	103	3/01	+			Milk	Private home
	Maine	3	10/07	+			Unknown	Private home
	Maine	14	10/20	+			Unknown	Private home
	Minnesota	25	5/14	+			Milk	Other
	New York	19	9/12	+		+	Unknown	School
	New York	10	11/10	+			Unknown	School
	Oregon	106	1/?	+			Milk	Private home
	New York City	3	5/30	+			Unknown	Restaurant
Citrobacter freundii								
	Arizona	48	8/09	+	+		Chicken	Restaurant
Clostridium botulinum								
	Alaska	9	9/2	+			Other meat	Private home
	California	1	3/22	+	+		Fruit or vegetables	Private home
	California	2	9/24		+		Other fish	Private home
	California	2	11/02	+	+		Fruit or vegetables	Private home
	Colorado	1	5/26	+	+		Other food	Private home
	Hawaii	1	8/21	+			Unknown	Private home
	Idaho	1	6/27	+	+		Other fish	Private home
	Montana	1	1/?	+			Multiple vehicles	Other
	Ohio	1	9/17	+			Fruit or vegetables	Private home
	Oregon	2	8/20	+	+		Fruit or vegetables	Private home
	Utah	1	1/7	+	+		Fruit or vegetables	Private home
Clostridium perfringens								
	California	23	1/13		+		Chicken	Private home
	California	19	3/16		+		Pork	Other
	California	19	8/21		+		Chicken	Other
	California	20	9/28		+		Beef	Restaurant
	Colorado	95	12/?	+	+		Beef	Other
	Connecticut	40	6/19	+	+		Beef	Picnic
	Connecticut	24	9/16	+			Unknown	Other
	Connecticut	35	9/30	+			Turkey	School
	Florida	35	5/28	+	+		Turkey	Other
	Georgia	130	3/25	+	+		Turkey	School
	Georgia	185	7/27	+	+		Turkey	Other
	Maryland	50	3/23		+		Multiple vehicles	Restaurant
	New Hampshire	48	11/23	+		+	Beef	School
	New Mexico	14	12/16	+	+		Mexican food	Restaurant
	New York	22	5/02		+		Sausage	Private home
	New York	7	3/25		+		Chicken	Private home
	New York	40	6/27		+		Other salad	Church
	North Carolina	90	6/02	+			Pork	Private home
	Pennsylvania	12	3/01	+	+		Beef	Other

Etiology	State	Number of Cases	Date of Onset	Lab Data Patient	Lab Data Vehicle	Lab Data Food-Handler	Vehicle	Location Where Food Mishandled and Eaten
Clostridium perfringens (Cont'd)								
	Pennsylvania	70	11/21	+	+	+	Beef	Restaurant
	South Carolina	15	10/25	+			Unknown	Restaurant
	Washington	2	1/22	+			Unknown	Restaurant
	Washington	24	5/10	+			Chicken	Restaurant
	Washington	9	5/11	+			Unknown	Restaurant
	Washington	2	9/16	+			Unknown	Restaurant
	Washington	3	12/02	+			Unknown	Restaurant
	Wisconsin	120	6/09	+			Other meat	Other
	Wisconsin	9	9/02	+	+		Mexican food	Restaurant
Salmonella								
S. typhi	Arizona	6	4/17	+		+	Chicken	Private home
S. saint-paul	California	2	1/23	+	+		Milk	Private home
S. alachua	California	9	5/?		+		Mexican food	Restaurant
S. enteritidis	California	77	6/?	+		+	Unknown	Restaurant
S. enteritidis	California	24	8/05	+		+	Unknown	Restaurant
Unknown	California	9	8/12	+			Unknown	Camp
S. haardt	California	26	10/18	+	+		Chicken	Other
S. enteritidis	Colorado	15	7/08	+		+	Beef	Restaurant
S. newport	Colorado	28	10/?	+			Multiple vehicles	Restaurant
S. litchfield	Connecticut	3	4/01	+			Unknown	Other
S. typhimurium	Connecticut	15	6/22	+			Multiple vehicles	Private home
S. typhimurium	Connecticut	14	8/02	+		+	Shellfish	Cafeteria
S. heidelberg	Delaware	37	6/22	+	+	+	Beef	Church
Group B	Delaware	37	7/25	+			Beef	Other
Group B	Florida	6	11/10	+		+	Unknown	Restaurant
Unknown	Florida	6	11/?				Unknown	Unknown
S. typhimurium	Georgia	48	5/28	+	+	+	Turkey	School
S. typhimurium	Georgia	22	5/31	+	+		Ice Cream	Church
S. heidelberg	Georgia	7	10/19	+	+		Multiple vehicles	Private home
S. enteritidis	Illinois	11	6/22	+			Unknown	Private home
S. enteritidis	Illinois	4	10/27	+			Unknown	Private home
S. enteritidis	Illinois	3	10/30	+			Unknown	Private home
S. mbandaka	Louisiana	18	3/13			+	Baked foods	Other
S. montevideo	Michigan	16	9/10	+			Other salad	Other
S. typhi	Michigan	18	10/12	+		+	Unknown	Other
Group B	Minnesota	8	3/22	+			Unknown	Private home
S. johannesburg	Minnesota	55	6/20	+			Turkey	School
S. typhimurium	Minnesota	54	7/12	+		+	Other salad	Other
Unknown	Mississippi	60	7/29	+			Chicken	Picnic
S. montevideo	Nebraska	18	8/11	+			Unknown	Other
Group D	New Hampshire	30	1/24	+		+	Unknown	School
S. typhimurium	New Jersey	47	7/29	+	+		Beef	Other
S. hadar	New Jersey	13	11/08	+			Multiple vehicles	Private home
S. enteritidis	New Jersey	74	12/25	+		+	Egg nog	Other
S. typhimurium	New York	321	1/?	+	+		Cheese	Private home
Unknown	New York	7	3/21	+			Milk	Private home
S. typhimurium	New York	86	4/18	+			Unknown	Restaurant
Group B	New York	19	6/07	+			Beef	Restaurant
Group C2	New York	39	8/01	+			Multiple vehicles	Restaurant
S. chester	New York	4	9/11	+			Beef	Private home
S. chester	New York	4	9/25	+	+		Beef	School
Group B	New York	13	12/06	+		+	Unknown	Other
Group C2	New York	55	12/10	+		+	Unknown	School
S. blockley, *infantis*	North Carolina	120	10/03	+	+		Pork	Other
S. drypool	Ohio	11	9/30			+	Unknown	Other
S. thompson	Pennsylvania	26	5/28	+	+	+	Shellfish	Restaurant
Groups B and C2	Pennsylvania	48	7/20	+			Beef	Other
S. chester, *typhimurium*	Pennsylvania	37	7/25	+			Beef	Other
S. saint-paul	Pennsylvania	14	8/29	+			Multiple vehicles	Picnic
S. saint-paul	Pennsylvania	3	9/25	+	+		Beef	Private home
S. saint-paul	Pennsylvania	11	9/27	+			Beef	Other
Group D	Pennsylvania	152	11/27	+	+		Turkey	Restaurant
Group C1	South Carolina	2	2/28	+		+	Unknown	Private home
Group C1	South Carolina	31	3/14	+	+		Unknown	Restaurant
S. hadar	South Dakota	19	6/07	+	+		Turkey	Private home

Etiology	State	Number of Cases	Date of Onset	Lab Data			Vehicle	Location Where Food Mishandled and Eaten
				Patient	Vehicle	Food-Handler		
Salmonella (Cont'd)								
S. typhimurium	Tennessee	181	4/01	+	+		Turkey	School
S. typhi	Texas	78	8/18	+		+	Beef	Private home
S. drypool, ohio	Texas	12	11/02	+		+	Unknown	Private home
S. chester, havana, tennessee	Vermont	47	9/01	+	+	+	Beef	Other
S. anatum	Vermont	30	10/21	+	+		Chicken	Other
S. enteritidis	Virginia	12	7/02	+		+	Unknown	Camp
S. saint-paul	Virginia	211	12/09	+		+	Mexican food	School
S. dublin	Washington	17	1/01	+	+		Milk	Private home
S. anatum	Guam	20	11/23	+			Unknown	Other
Unknown	New York City	2	8/08	+		+	Unknown	Restaurant
S. agona	New York City	4	11/08		+		Unknown	Restaurant
Shigella								
S. flexneri	California	7	6/14	+		+	Unknown	Restaurant
Group D	Colorado	20	11/?	+			Potato salad	Other
S. flexneri	Connecticut	23	10/20	+		+	Other salad	Restaurant
S. sonnei	Florida	119	9/14	+			Unknown	Other
S. sonnei	Georgia	76	10/13	+		+	Unknown	School
S. flexneri	Minnesota	32	10/12	+		+	Chicken	Church
S. sonnei	Virginia	14	2/28	+		+	Unknown	Restaurant
S. sonnei	Virginia	42	9/28	+		+	Potato salad	School
Group D	Washington	18	9/28	+			Unknown	Private home
Staphylococcus aureus								
	Alabama	145	2/26		+		Unknown	School
	Alabama	18	8/16		+		Ice Cream	Picnic
	Alabama	16	8/31	+	+		Multiple vehicles	Picnic
	Arizona	116	5/15		+	+	Turkey	School
	Arkansas	8	10/29	+	+		Beef	Restaurant
	California	1000	11/04	+			Milk	School
	California	40	12/23	+	+		P. P. + Egg salad	School
	Connecticut	28	8/24		+	+	Baked foods	Private home
	Connecticut	2	8/30		+	+	Baked foods	Private home
	Connecticut	20	8/30		+	+	Baked foods	Private home
	Florida	182	5/20	+	+	+	Other salad	School
	Florida	22	10/06			+	Unknown	Restaurant
	Florida	101	12/08		+	+	Turkey	Other
	Georgia	42	8/28		+		Pork	Restaurant
	Illinois	4	11/15		+		Ham	Private home
	Indiana	2	5/06		+		Fruit or vegetables	Private home
	Kansas	100	6/09		+		Unknown	Restaurant
	Maine	11	8/02	+	+		Ham	Private home
	Maryland	3	2/01	+	+		Unknown	Private home
	Montana	5	12/20		+		Vennison	Private home
	Nevada	41	7/12	+	+	+	Ham	Other
	New York	16	5/02	+	+		Cheese	School
	New York	12	7/16		+		Baked foods	Private home
	New York	5	7/17		+		Beef	Restaurant
	New York	9	8/30		+		Baked foods	Private home
	New York	22	8/30		+		Baked foods	Private home
	New York	2	11/25		+		Sausage	Private home
	North Carolina	339	7/25	+	+	+	Ham	Other
	Ohio	13	8/09		+	+	Ham	Picnic
	Ohio	2	10/17		+		Pork	Private home
	Ohio	3	12/03	+	+		Other fish	Private home
	Pennsylvania	11	5/10	+	+		Ham	Private home
	Rhode Island	7	10/09		+		Baked foods	School
	South Carolina	30	11/16		+		Beef	Other
	Tennessee	14	7/13	+	+	+	Ham	Restaurant
	Tennessee	120	11/08	+	+	+	Turkey	Church
	Texas	155	12/17		+	+	Turkey	School
	Texas	33	12/18		+		Ham	School
	Vermont	23	8/05		+		Unknown	Church
	Washington	21	12/22	+	+		Chicken	Private home

Albert E. Pope
United Egg Association
Suite 410
2501 M Street N.W.
Washington, D.C. 20037

Dear Mr. Pope:

This is in response to your letter of January 30, 1985, regarding the use of centrifuge egg breaking machines in commercial establishments.

While we are aware that there is a potential for misuse of the centrifuge egg breaking machine by using eggs that may contribute filth to the liquid eggs, such adulteration would be caused by the user and not by the machine. We also share your concern that the use of adulterated egg products be prevented.

If we receive evidence that misuse of the machine results in an adulterated egg product we will take action against such product that is under our jurisdiction.

We recently met with the manufacturer of the "Egg Master" egg breaking machine. To ensure that the machine is not only used properly but also to avoid accidental contamination the manufacturer is revising the use instructions for the machine to state: (1) use only USDA sanitized eggs, Grade B or better, (2) visually inspect eggs for dirt or broken shell (caution: if eggs are dirty or cracked, do not use!), (3) use liquid egg mixture only in products to be baked or cooked, and (4) for use in uncooked end products, use pasteurized eggs or hand crack your eggs.

We believe that if these instructions are followed there will be little liklihood of this egg breaking method resulting in adulterated egg products.

Sincerely,

John M. Taylor
Director
Division of Regulatory Guidance
Center for Food Safety
and Applied Nutrition

cc:
HFR-3240
HFO-20
HFF-314 r/f
HFF-300 r/f
HFC-1 r/f
JWRiggins:yvg:2/21/85
Initial:LTaylor:2/20/85
RENewberry:2/20/85
JRLupien:2/21/85

Carl E. Nall
Executive Director
Pacific Egg & Poultry Association
9800 S. Sepulveda Blvd.
Suite 618
Los Angeles, CA 90045

Dear Mr. Nall:

This is in response to your letter of August 2, 1984, to Dr. Novitch, regarding the use of centrifuge egg breaking machines in bakeries and other commercial institutions.

We appreciate and share your concerns regarding the use of the centrifuge egg breaking machine in bakeries, restaurants and other food manufacturing plants. However, unlike the U.S. Department of Agriculture which has the authority to approve machinery used in egg products plants subject to their jurisdiction and inspection, the Food and Drug Administration does not have the authority to approve (or to disapprove) the equipment used in food manufacturing plants.

However, if the use of the centrifuge egg breaking machine results in a product which is adulterated within the meaning of section 402(a)(3) or (a)(4) of the Federal Food Drug, and Cosmetic Act in that the product may contain a filthy, putrid or decomposed substance or may be otherwise unfit for food, or may have been held, packed, or prepared under insanitary conditions whereby it may have become contaminated with filth, then action could be taken against the food but not against the equipment. However, if clean and wholesome eggs are used such type of adulteration would be extremely remote.

Sincerely yours,

Sanford A. Miller, Ph.D.
Director
Center for Food Safety
and Applied Nutrition

cc:
HFF-1
HFR-9240
HFO-20
HFF-314 r/f
HFF-300 r/f
HFC-1 r/f
R/D:JWRiggins:8/16/84
F/T:yvg:8/20/84
Initial:LTaylor:HFF-314:8/16/84
REWewberry:HFF-314:8/16/84
JMTaylor:HFF-310:8/16/84
TMQuinn:HFF-300:8/16/84

BEST COPY AVAILABLE

b2

Poultry Division

May 21, 1984

Mr. James L. Summers
Assistant to the Director
Division of Regulatory Guidance
Bureau of Foods, FDA, HFF-314
200 C Street, SW.
Washington, D.C. 20204

Dear Jim,

This is in followup to our recent conversation regarding the Egg Master, the centrifuge manufactured by MiSa Manufacturing, Inc., Westminster, California, that is being marketed as an egg breaking machine.

As we discussed, in the October 18, 1983, letter you referenced, the Department of Agriculture's Food Safety and Inspection Service (FSIS) granted approval of the centrifuge manufactured by MiSa Manufacturing, Inc. In their approval letter, FSIS officials referred to the centrifuge as an egg breaking machine. However, in a March 29 letter to MiSa Manufacturing (enclosed), FSIS rescinded acceptance of the MiSa centrifuge as an egg breaking machine and indicated the machine would be approved as a centrifuge to be used for purposes other than egg breaking.

We are also enclosing a copy of a May 18 memorandum being distributed to our field supervisors. Information included in that memorandum will be used by those supervisors in addressing possible misconceptions regarding acceptability of the MiSa centrifuge for processing eggs to be used in food intended for human consumption.

If we can provide any additional information, please contact us.

Sincerely,

5/21/84

Howard M. Magwire
National Supervisor
Egg Products, Grading Branch

Enclosures

b2

b2

Poultry Division

May 21, 1984

Mr. Carl E. Nall
Executive Director
Pacific Egg & Poultry Association
9800 S. Sepulveda Blvd., Suite 618
Los Angeles, California 90045

Dear Carl,

Thank you for your May 7 letter concerning a centrifuge manufactured by MiSa Manufacturing, Inc., Westminster, California, that is being marketed as an egg breaking machine.

The information you referenced regarding the Food Safety and Inspection Service (FSIS) approval of the MiSa machine is correct. Enclosed is a copy of the March 29, 1984, letter FSIS, Meat and Poultry Inspection officials sent to MiSa rescinding acceptance of the centrifuge as an egg breaking machine. We are also enclosing a copy of a May 18 memorandum being distributed to our supervisory staff. As the memorandum indicates, information provided in it is to be used by our supervisors in clarifying misconceptions about acceptability of the MiSa machine for processing eggs to be used in food intended for human consumption.

Carl, we understand your concerns and appreciate your efforts in this situation. You may also wish to discuss this matter with Sam Traylor. Sam and a Food and Drug Administration investigator recently reviewed four bakeries that are using the Egg Master.

If we can provide any additional information on this matter, please contact us.

Sincerely,

5/21/84

Howard M. Magwire
National Supervisor
Egg Products, Grading Branch

Enclosures

cc:
Traylor, Modesto, CA

b2

United States
Department of
Agriculture

Food Safety
and Inspection
Service

Washington, D.C.
20250

June 17, 1983

Mr. M. E. Maynard
Misa Manufacturing, Inc.
7766 Westminster Ave.
Westminster, CA 92683

Dear Mr. Bornstein:

Thank you for your recent letter and drawings of your Egg Breaking Machine Model 81081-983.

The design and construction of the machine as represented in the drawings appear to be acceptable. We will be glad to authorize a trial installation upon application from a federally inspected meat or poultry plant.

Sincerely,

Royal J. Oyster

Royal J. Oyster
Branch Chief
Equipment Branch
Meat and Poultry Inspection
Technical Services

United States Department of Agriculture
Food Safety and Inspection Service
Washington, D.C. 20250

October 18, 1983

Maria and Son
4205 Hereford Street
St. Louis, MO 63109

Gentlemen:

The following equipment is acceptable for use in federally inspected meat and poultry plants.

EQUIPMENT: Egg Breaking Machine, Model 81081-982

MANUFACTURER: Misa Manufacturing, Inc., Westminster, CA

If you plan to use this equipment on a permanent basis and its installation requires significant changes in the present layout, new floor plan drawings showing the equipment in its proper location should be submitted to the Facilities Group for review.

This acceptance does not imply compliance with Department of Labor Occupational Safety and Health Standards, nor should it be considered as an approval of processing methods. Any departure from established procedures must be cleared with the Slaughter Inspection Standards and Procedures Division or the Processed Products Inspection Division.

Sincerely,

L.C. Hussey
Industrial Specialist
Equipment Branch
Meat and Poultry Inspection Technical Services

Original acceptance letter
recieved by Maria

EQUIPMENT STATUS REPORT

INSTRUCTIONS: Use this form to report the status of equipment. Refer to the Inspection of Meat and Poultry Equipment Guide. Complete original and two copies. Send original to Equipment Group and one copy to Area Office, keep one copy on file.

1. NAME OF ESTABLISHMENT: MARIN + SON
2. ESTABLISHMENT NO.: 8691
3. LOCATION OF PLANT: 4205 Hereford St Louis Mo
4. NAME OF EQUIPMENT: Egg Breaking Machine
5. NAME AND ADDRESS OF MANUFACTURER:
MISA Manufacturing Inc
7766 Westminster Ave
Westminster, Calif 92683
6. MODEL NO.: 81C81 - 982
7. CATEGORY (Check): ☑ Commercial ☐ Custom Made ☐ Bakery ☐ Other (Specify)
8. ACCEPTANCE BY EQUIPMENT GROUP: ☐ Required ☐ Not Required
9. CONDITION: ☑ Satisfactory ☐ Rejected
10. DATE REJECTED:
11. DATE MFR. NOTIFIED:
12. CAUSE FOR REJECTION:
13. BRIEFLY DESCRIBE CORRECTION:
14. CORRECTION(S) MADE BY: ☐ Plant ☐ Manufacturer
15. DATE CORRECTION(S) MADE:
16. PRESENT STATUS: ☑ In use ☐ Rejected for use ☐ Removed from Plant ☐ Experimental (30 day trial)
17. BRIEFLY DESCRIBE DESIGN, CONSTRUCTION, MATERIALS, AND SANITARY MAINTENANCE OF EQUIPMENT.

This piece of equipment is so designed to be easily taken apart for cleaning. The Hopper is plastic, the rotating drums are stainless steel. The base and where drums rotate is constructed of aluminum. One basket lifts out for cleaning, 2nd basket is held by a wing nut and is easily removed. This unit can be completely taken apart for easy cleaning, and I can foresee no problems in cleaning.

Based upon my observations of this piece of Equipment in operation and in the breaking down + cleaning of same. I recommend acceptance for use in USDA inspected Meat + Poultry plants

18. SIGNATURE OF INSPECTOR IN CHARGE: Frank R. Farris
19. DATE SIGNED: 10/17/83

MP FORM 133 (10/7..)

USDA-FSQS

United States
Department of
Agriculture

Food Safety
and Inspection
Service

Washington, D.C.
20250

October 18, 1983

Misa Manufacturing, Inc.
7766 Westminster Avenue
Westminster, CA 92683

Gentlemen:

A review of the drawings and reports from our inspectors indicates that the following equipment is constructed of acceptable materials, performs satisfactorily, and can be maintained in good sanitary condition:

Egg Breaking Machine, Model 81081-982

Therefore, the above equipment is acceptable for use in federally inspected meat and poultry plants. Any changes in design, construction, and materials in future models should be reviewed and evaluated by this office. Once this equipment is published in our "Accepted Meat and Poultry Equipment" booklet, this letter becomes invalid and can no longer be used as an authorization for installation of equipment in plants.

This acceptance does not imply compliance with Department of Labor Occupational Safety and Health Standards, nor should it be considered as an approval of processing methods. Any departure from established procedures must be cleared with the Slaughter Inspection Standards and Procedures Division or the Processed Products Inspection Division.

Sincerely,

L.C. Hussey
Industrial Specialist
Equipment Branch
Meat and Poultry Inspection Technical Services

United States
Department of
Agriculture

Food Safety
and Inspection
Service

Washington, D.C.
20250

March 29, 1984

Mr. H. E. Maynard
Misa Manufacturing Company
7766 Westminster Avenue
Westminster, CA 92683

Dear Mr. Maynard:

It has been brought to our attention by our Inspection Personnel, Food Safety and Inspection Service and the Egg Products Inspection Section, Grading Branch, Agriculture Marketing Service, that your Centrifuge type machine, Model, 81081-982 is not suitable for breaking eggs intended as an ingredient in meat or poultry items. Regulation state that shell eggs must be broken individually and examined for wholesomeness at time of breaking.

Therefore, we will not list your equipment as an egg breaking machine. However, we have no objection to its being used as a centrifuge and will list it in our "Accepted Meat and Poultry Equipment" booklet as follow-Centrifuge Model, 81081-982.

This letter supersedes our letter of October 18, 1983.

Sincerely,

Royal J. Oyster

Royal J. Oyster
Branch Chief
Equipment Branch
Facilities, Equipment, and Sanitation Division
Meat and Poultry Inspection Technical Services

United States
Department of
Agriculture

Food Safety
and Inspection
Service

Meat and Poultry
Inspection Program

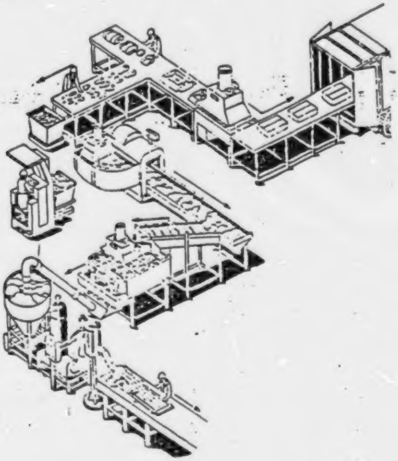
Technical
Services

MPI-2

Accepted Meat and Poultry Equipment

Listing in new equipment Book

AF11-84



B&M MILLER, INC.
BOSCOBELL, WISCONSIN
S.S. Smokehouse B&M M500

MILWAUKEE SEASONING LABORATORIES
GERMANTOWN, WISCONSIN
Basting Injector and Control, 100

MILLER METAL FABRICATORS
STAUNTON, VIRGINIA
S/S Chill Tank: CW-73
S/S Turkey Shackle: S-12

MINNESOTA MINING AND MANUFACTURING CO.,
ST. PAUL, MINNESOTA
Box Sealers: Series S-610-
Model 275, 477
Gauge Insertion Machine:
1, 4650 DR, 4650 DRA
4670 DRA

MIRA-PAK, INC.
HOUSTON, TEXAS
Packaging Machine: GS, HS, KS,
TKS, HPS, MS, RV-12-ES,
RV-12-BS

MISA MANUFACTURING, INC.
WESTMINSTER, CA
Centrifuge: 81081-982

MITSUBOSHI BELTING LTD.
NAGATAKU, KOBE, JAPAN
Belts (Food Contact)
White, 2, 3 or 4 Ply:
F-CON-51 (Belts with cotton carcasses must have edges sealed with chemically acceptable compound.)

MIXING EQUIPMENT COMPANY
ROCHESTER, NEW YORK
Portable Mixers: UNS-A, UNS-.,
UND-.A, UND-.
Mixer: "Lightin" UNAR-...,
UNAG-..

JOHN MOHR & SONS - HYDRAHONE DIV.
CHICAGO, ILLINOIS
Neck Cutter: Hydrahone, HPC
Neck Skin Cutter: BNC
Vacuum Nozzle: AVL, VL, WCL,
BCL, DV, HYL, HVL-S
Vent Cleaner: VCN
Cutter: Double Head
"Hydrahone" Tendon Puller:
TP-FP
Shrink Tunnel: HST-..
Dri-Line Shackle: DS-1
Automatic Tripper: HST-8000
Tendon Puller: HTP
"Hydraphone" Turkey Hock
Cutter HTHC-3000

MOJONNIER BROTHERS COMPANY
CHICAGO, ILLINOIS
Deaerator: C-..

MOLDED FIBREGLASS TRAY CO.
LINESVILLE, PENNSYLVANIA
Food Trays: 30., 33.
Tote Boxes: 7..-.
Tote Box Lids: 7..-...

MOLDEX, INC.
PUTNAM, CONNECTICUT
Polyurethane Solid Round:
1/8" thru 9/16"
Polyurethane V Belting:
"A", "B", "C"
Belts (Food Contact): Moldex
Flat E, T

MOLINE COMPANY
DULUTH, MINNESOTA
Dough Cross Roller: MCR-..
Dough Extruder: 10-10, 10-14
Processing Belt Conveyor: PC-1

MONO GROUP INC.
BENSENVILLE, ILLINOIS
Lobeflo S/S Pump...MDM With
Sanitary Type Connections

THE MONTAQUE COMPANY
HAYWARD, CALIFORNIA
S/S Gas Ovens: S115, S115A,
S115S, S136, S236, S2115A,
S2115S, SP115, SP115A,
SP115S, SP136, SP236, SP2115,
SP2115A, SP2115S
S/S Electric Ovens: SEK15A,
SPEK15A, S2EK15A, SP2EK15A

MONTICELLO INDUSTRIES
ATLANTA, GEORGIA
Cutting Board: ABCO "Monti-Poly"

MORGAN DESIGN, INC.
SKOKIE, ILLINOIS
Automatic Product Ejector:
2721-1000
Automatic Mold Washer: 2741-500

MORLAND PRODUCTS, INC.
MANCHESTER, CONNECTICUT
Air Operated S/S Plug Type
(with sanitary type end
connectors)
Valve: MVXX-5, MVXX-3

MORRIS & ASSOCIATES INC.
RALEIGH, NORTH CAROLINA
Salting System
Freezer: PFF
Freezer w/CIP System: CBF
Giblet Pumping & Chill System
Freezer: PFS-60H-2515-F
Poultry Carcass Chiller: MNT-..
Water Overflow Meter: WM-10-G
Heat Exchanger: WRC-...HSS
Continuous Belt Freezer:
SMF-....
Giblet Chiller: GS-..MNT
Turkey Chiller: MNT
Nugget Ice Machine: NIM-RA-15T
Ice Maker (Ice Master): NIM-..
H-.-T, NIM-..-H-..-T, NIM-...-H
-..-T, PIM-..H-.-T, PIM-..H-
..-T, PIM-...H-..T

115

April 25, 1984

Karen Darling
Deputy Assistant Secretary
for Inspection Services

Karen,

We still don't know exactly what to do about Mr. Berman's complaint on the "Egg Master" breaker that is being used by some bakeries. Nevertheless, next week our West Coast regional supervisor is going to visit four bakeries using the machine. He has persuaded the Food and Drug Administration representative in California to accompany him. Perhaps in this way we can demonstrate to FDA the seriousness and unfairness of the problem. Also while visiting the bakeries, we will conduct a thorough inspection to make sure the bakeries are only breaking USDA Grade B or better eggs as required by the Egg Products Inspection Act. Our West Coast supervisor has also asked Mr. Berman for the names of additional bakeries using the machine in hopes that he can persuade FDA to visit them.

H. C. Kennett, Jr.
Director
Poultry Division, AMS

Poultry Division

July 5, 1984

Mr. Carl E. Nall
Executive Director
Pacific Egg & Poultry Association
9800 Sepulveda Blvd., Suite 618
Los Angeles, California 90045

Dear Carl,

We share the concerns about the centrifugal egg breaking equipment discussed in your letter of June 29. We have worked long and hard with the egg products industry and equipment manufacturers to establish equipment standards that would be efficient and produce a wholesome, unadulerated product, so it is discouraging to observe what has taken place.

Perhaps some legislative history is in order to explain our position. When the Egg Products Inspection Act (EPIA) was being debated, a decision was made that liquid, frozen, or dried egg product should be manufactured under continuous inspection. It was decided at that time that shell egg plants need not be continuously inspected because unwholesome or potentially dangerous eggs in shell form could be detected at any place or time in the marketing system. Therefore, a spot check (presently once a quarter) of shell egg packers to determine the disposition of their undergrade or restricted eggs would be sufficient inspection to prevent harmful eggs from reaching consumer channels. Checks and dirties (unless cleaned at the packing plant) had to go to egg products plants for proper disposition and processing under continuous inspection; and leakers, loss, inedibles, and incubator rejects had to be destroyed for use as human food. Thus, all eggs sold to consumers, bakeries, restaurants, and other food manufacturing plants would be clean, have sound shells, and not be a health hazard.

The Act and regulations limited continuous inspection to the traditional egg breaking and drying plants. It would have been impractical, unnecessary, and too costly to require continuous inspection at every location that breaks clean, sound shell eggs—bakeries, restaurants, and other food manufacturers. But in developing the legislatior, regulations, and instructions for administering the EPIA, some were farsighted enough to realise this could be a problem. That's why the regulations allow bakeries to only break wholesome eggs for immediate use and prevent them from performing other forms of processing, such as packaging and freezing. We believe our original decision remains sound if adequate enforcement is maintained.

Under the EPIA and a Memorandum of Understanding signed by the U.S. Department of Agriculture and the Food and Drug Administration (FDA) of the Department of Health and Human Services, FDA has enforcement authority for all bakeries, restaurants, and food manufacturers; and USDA has exclusive jurisdiction in official egg products plants. Under USDA, each piece of equipment used in a meat, poultry, or egg products plant has to be approved. Under FDA, there is no such requirement. They rely on on-site visits and/or end product examinations for unwholesomeness or adulteration for their enforcement.

The Department has discussed the pitfalls of the centrifugal egg breaker with FDA. In fact, Karen Darling, Deputy Assistant Secretary, has personally discussed this with a high-ranking FDA official. On the west coast, Sam Traylor, Regional Director of our Grading Branch has made on-site reviews of bakeries using the centrifugal breaker with FDA officials. They found some problem areas in some of these bakeries and we assume FDA has taken, or will take, appropriate action since they have jurisdiction. Our other Regional Directors have been asked to do the same if a problem arises in their regions.

Carl, this a frustrating experience for us as well as the egg products industry. We have taken about all the action we can under our authority and will continue to press the issue as problems arise.

Sincerely,

H. C. Kennett, Jr.
Director

cc:
Sam Traylor
Robinson/Niebuhr

bl

BISSC
CERTIFIED

Authorization No. 351

This Is To Certify That

Name MISA MFG., Inc.

Address 7766 Westminster Avenue, Westminster, CA 92683

is hereby authorized to apply the BISSC symbol to the models of equipment, listed below, conforming to the Baking Industry Sanitation Standards Committee Standards

No. Basic Criteria Dated 10/01/81

For "Egg Master" Model #81081-982

Model Designations

for the twelve months ending December 31, 1984

Date of Issuance: December 31, 1983

William E. Pegis
Director of Certification
BAKING INDUSTRY SANITATION STANDARDS COMMITTEE

• • • • •

The issuance of this authorization for the use of the BISSC symbol is based upon the certification, by the applicant for it, that the equipment listed above complies fully with the Baking Industry Sanitation Baking Industry Sanitation Standards Committee standards designated. Legal responsibility for compliance is solely that of the holder of this Certificate of Authorization, and the Office of Certification of the Baking Industry Sanitation Standards Committee does not warrant that the holder of an authorization at all times complies with the provisions of the said Office of Certification. This in no way affects the responsibility of the Baking Industry Sanitation Standards Committee to take appropriate action in the cases in which evidence of non-compliance has been established.

Form No. 2-A

United States Testing Company, Inc.
California Division
5555 TELEGRAPH ROAD, LOS ANGELES, CALIFORNIA 90040
TELEPHONE: LOS ANGELES—213/723-7181
FROM SAN FRANCISCO—415/928-5855
EST 1880

REPORT OF TEST

Misa Manufacturing, Inc.
7766 Westminster Avenue
Westminster, CA 92683

"EGG MASTER" EXTRACTOR

May 24, 1983

TEST REPORT NO. LA 30803

SIGNED FOR THE COMPANY

BY

Barbara Belmont
Barbara Belmont
Manager/Chemistry

Supervised by: Bernd S. Givon
Vice President

K. McDonald
K. McDonald
Chemical Technician

Page 1 of 9

ml

THIS REPORT APPLIES ONLY TO THE STANDARDS OR PROCEDURES IDENTIFIED AND TO THE SAMPLE(S) TESTED. THE TEST RESULTS ARE NOT NECESSARILY INDICATIVE OR REPRESENTATIVE OF THE QUALITIES OF THE LOT FROM WHICH THE SAMPLE WAS TAKEN OR OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS. NOTHING CONTAINED IN THIS REPORT SHALL MEAN THAT UNITED STATES TESTING COMPANY, INC., CONDUCTS ANY QUALITY CONTROL PROGRAM FOR THE CLIENT TO WHOM THIS TEST REPORT IS ISSUED. UNLESS SPECIFICALLY SPECIFIED OUR REPORTS AND LETTERS ARE FOR THE EXCLUSIVE USE OF THE CLIENT TO WHOM THEY ARE ADDRESSED, AND THEY AND THE NAME OF THE UNITED STATES TESTING COMPANY, INC. OR ITS SEALS OR INSIGNIA, ARE NOT TO BE USED UNDER ANY CIRCUMSTANCES IN ADVERTISING TO THE GENERAL PUBLIC AND MAY NOT BE USED IN ANY OTHER MANNER WITHOUT OUR PRIOR WRITTEN APPROVAL. SAMPLES NOT DESTROYED IN TESTING ARE RETAINED A MAXIMUM OF THIRTY DAYS.

REFERENCES

1) Tests and charges were authorized by Mr. Mike Maynard, President, in conference commencing May 12, 1983.
2) Egg Master Manual of Instructions and Specifications.
3) National Sanitation Foundation, Food Service Equipment, Basic Criteria C-2.
4) National Sanitation Foundation Food Preparation Equipment Commercial Powered, Standard Number 8.

SAMPLE DESCRIPTION

One Egg Master Egg Extractor, Model 81081-982, Serial No. 82-177, was submitted and identified by the Client.

REQUEST AND METHOD

The Egg Master was examined and evaluated for compliance with National Sanitary Foundation Standard No. 8 and Basic Criteria C-2, as applicable, regarding sanitary, cleanability, construction and performance requirements.

BEST COPY

RESULTS

N.S.F. STANDARD NO. 8

Section 3 Materials	Requirement	Sample Findings
3.5 Welding	Weld area and deposited weld material shall be equally as corrosion resistant as parent material.	Complies. Evaluated by adapted procedure of ASTM B-380, Corrodkote Method.
Section 4 Design and Construction		
4.1 Cleanability	All food contact surfaces shall be readily accessible for cleaning and inspection either in an assembled position or when removed.	Complies. All food surfaces readily accessible. for cleaning and inspection when removed; egg shell basket somewhat awkward to clean. (See Note 1).
4.1.2	In equipment of such design that heavy duty or high speed operation is intended, all parts which require cleaning shall be accessible by use of simple tools and shall result in thorough cleaning and sanitizing of the equipment.	No tools needed to disassemble equipment.
4.2 Function	Equipment shall be designed and constructed so that food(s) can be added and the finished product dispensed or removed in a sanitary manner.	Eggs introduced and dispensed from equipment in a sanitary manner.

RESULTS (Cont.)

N.S.F. STANDARD NO. 8

Section 4 Design and Construction (Cont.)	Requirement	Sample Findings
4.6 Fastening Methods	Exposed stud, threads, screw, heads, nuts and studs shall be eliminated from food contact surfaces; provided, however, that when exposed or unexposed threads are necessary, because of functional requirements they shall be ANSI B1.8 Stub Acme screw threads or 60° Stub thread or equal.	Unexposed threads necessary to functional requirements; uses UNF fine thread. (See Note 3)
Splash and Non-Food Contact Surfaces		
4.8 General Design and Construction	Equipment shall be designed and constructed in such a manner as to minimize the retention of moisture and dust, the shelter of vermin and dirt and to facilitate inspection, servicing, maintenance and cleaning.	Complies.
4.10.1 Interior Fastenings	In areas subject to cleaning, interior fastenings shall be accomplished in a manner as to minimize projections, ledges and recesses.	Complies

RESULTS (Cont.)

N.S.F. STANDARD NO. 8

General	Requirement	Sample Findings
4.11.5 Movable	A unit intended to be moved for cleaning the area beneath shall not exceed 80 pounds (36.3kg) in weight and shall have no utility connection or have a connection than can be easily disconnected without tools.	Passes. Unit weights 65 pounds; utility connection disconnects with ease.
4.13 Motors	Motor enclosures or motors not located in such enclosures shall be drip proof.	Motor is drip proof.
4.14 Doors and Covers	Covers shall be manufactured to conform with the standard of manufacture and shall be sized to fit and close properly.	Round cover conforms with standard of manufacture and sized to close properly.
4.14.1 Single Panel	Single panel covers shall be fabricated in such a manner to minimize the collection of soil particles, spillage and other foreign matter.	Complies.
4.16.2 Entry	All joints and seams where piping, equipment, rotary shafts and other functional parts extend into food storage compartments shall be closed and sealed at the point of entry or a properly designed deflecting apron provided.	Rotary shaft closed and sealed at point of entry.

RESULTS (Cont.)

N.S.F. STANDARD NO. 8

General	Requirement	Sample Findings
4.19 Welding	Whenever welded areas are used in food contact surfaces, such weld areas shall be smooth.	Weld areas smooth with mirror finish.
Section 5 Specific Design & Construction		
5.1.2 and 5.4.5	Components shall be stainless steel or equivalent.	Components certified as A.N.S.I. 304 stainless steel.

N.S.F. C-2

Section 2 Definitions		
2.1.1 Easily Cleanable	Readily accessible and of such material and finish and so fabricated that cleaning can be accomplished by normal methods.	Cleaning was accomplished by normal methods even after residue had been permitted to dry 24 hours.
2.7 Sealed	Having no openings that will permit the entry of dirt or liquid seepage; applies to joints and seams.	Opening where finished product is dispensed not sealed. (See Note 2)
2.8 Smooth	A surface free of pits and inclusions having a cleanability to the following:	Surface free of pits and inclusions.
	Food Contact Surfaces: No. 3 (100 grit) finish on stainless steel.	Has mirror finish, i.e., superior to No. 3 finish.

RESULTS (Cont.)

A sealant identified by the Client as Silastic 732 RTV Adhesive/Sealant was used in the outer shell of the Egg Master. Silastic is a silicon-based polymer allowed for use in food contact surfaces per para. 177.2600, Chapter 1, Title 21, Code of Federal Regulation.

Note 1: The interior basket (the eggshell basket) has a double turned, reinforced rim cavity from which the shell remnants must be removed by cleaning immediately.

Note 2: A cover is recommended over the finished product discharge tube to prevent ingress of dirt when the machine is not in use.

Note 3: Although the thread on the stud and mating wing nut are of "fine" gauge they are not exposed when the basket is assembled, ready for use, and therefore, do not collect residues.

COMMENTS

The following applicable sections of N.S.F. Food Service Equipment Basic Criteria C-2 were also addressed in N.S.F. Commercial Powered Food Preparation Equipment Standard No. 8:

3.1 Food Contact Surfaces
3.2 Splash Contact Surfaces
3.3 Nonfood Contact Surfaces
3.4 Welding
3.8 Plastics
4.1 Cleanability
4.2 Function
4.5 Joints and Seams
4.6 Fastening Methods
4.7 Finishing
4.22.2 Entry Points
4.28 Portable/Tiltable

CONCLUSIONS

The Egg Master Model 81081-982 egg extractor meets the requirements for sanitary design and performance, as detailed in the above results for testing to compliance with N.S.F. Standards.

* * * * * *

IMPORTANT INSTRUCTIONS

FOR USE OF

EGG KING MACHINE

- Carefully review instruction manual before using.
- Use only USDA sanitized eggs, grade B or better.
- Visually inspect eggs using the plastic flat provided. Invert eggs to enable you to visually inspect top and bottom of eggs for dirt, broken shell, or foreign material in egg flat.

CAUTION

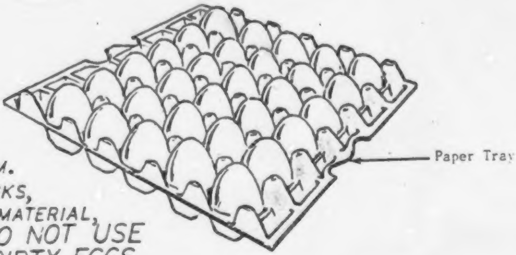
If eggs are dirty or cracked, **DO NOT USE!**
Return to egg supplier for refund (or credit.)

- Use liquid egg mixture only in products to be cooked or baked for at least 3.5 minutes at a temperature of 200°F or higher.
- Organoleptically inspect (sight & smell) liquid at the discharge spout. If you detect abnormal color or smell, reject that batch and return to supplier. (Clean & sanitize equipment prior to continued use.)
- Best results are achieved if eggs are broken immediately prior to use.
- Unused liquid egg must be immediately refrigerated, below 38°F. (Do not freeze.)
- For use in uncooked end products, use pasteurized eggs or hand crack your eggs.
- At the end of each cracking period or four hours, clean machine as per instruction manual.

VISUAL INSPECTION FOR DIRT AND BROKEN SHELLS

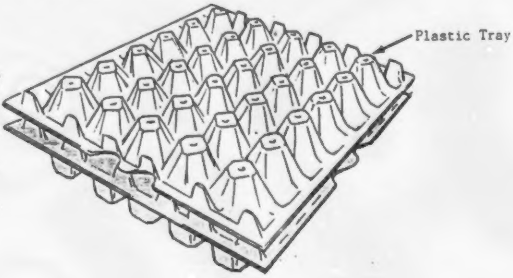
STEP I

EGG TRAYS AS YOU RECEIVE THEM. INSPECT FOR CRACKS, DIRT OR FOREIGN MATERIAL, REMOVE SAME. DO NOT USE CRACKED OR DIRTY EGGS.



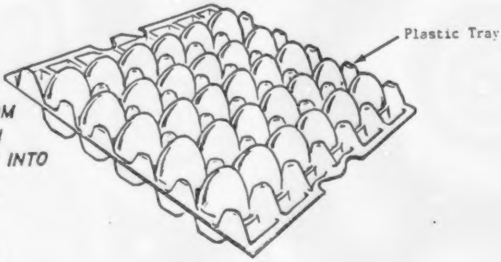
STEP II

PLACE THE PLASTIC TRAY, PROVIDED WITH YOUR EGG KING, OVER PAPER TRAY OF EGGS AND INVERT.



STEP III

DISCARD PAPER TRAY, INSPECT BOTTOM SIDES OF EGGS AS IN STEP I, THEN DUMP INTO EGG KING.



How one lobby egged Congress on

RECEIVED OCT 21 1985

Californian Mike Maynard spent his days in the military as a cook and hated the routine of breaking eggs. Not just one or two eggs, but dozens at a time.

So when Mr. Maynard became a civilian he solved the problem for cooks everywhere by inventing an egg-breaking machine, the "Egg King," which cracks up to 360 eggs a minute and automatically strains out the shells. Over the last five years restaurants, bakeries, hospitals, military chow halls, fast food outlets, and hotels by the hundreds have purchased Mr. Maynard's device.

But not everyone is happy with what one egg distributor calls "the little monster." For the Egg King allows users to buy fresh eggs instead of having to pay premium prices for the frozen or dried egg mixture made from lower-grade eggs that producers otherwise couldn't sell.

So what to do? Get the government to put your competitor out of business, of course.

The United Egg Producers went to both the Department of Agriculture and the Food and Drug Administration earlier this year to ask for a federal ban on the machine. Neither agency had authority to outlaw use of the Egg King, and the FDA said it saw no need to do so, observing that with proper instruction of users "there will be little likelihood of this egg-breaking method resulting in adulterated egg products."

The FDA offered to take action if the egg producers could cite any hazardous "misuse of the machine," but the UEP admitted that it knew of no instances of illness caused by the machine since it went on sale nearly five years ago.

But the industry, proclaiming its selfless concern for Americans' health, hired a lobbyist and took the battle to Congress. On July 30, without hearings and after only perfunctory debate, the House Agriculture Committee stuck six lines — 42 words in all — into the 525-page House version of the farm bill, to put Mr. Maynard out of business.

It was more than a week before Mr. Maynard became aware of UEP's ploy, hired his own lobbyist, and eventually flew to Washington himself.

Nearly two months of political trench warfare then ensued. The UEP spread threats of doom, but restaurants, hotels, and other Egg King users — who have their reputations at stake in the safety of their products — denounced the UEP's feigned consumer concerns as being "without foundation."

Indeed, the Egg King has received widespread approval, from USDA's Meat and Poultry Division to state and county health departments to the Bakery Equipment Sanitation Standards Committee. California's Department of Health even concluded that the Egg King process "appears to be superior to the present hand method of cracking and straining of eggs."

But having the facts on his side almost wasn't enough for Mr. Maynard. USDA, for example, flip-flopped five times in two years under UEP pressure, the last reversal coming overnight on Oct. 3 when, officials report, Agriculture Secretary John Block traded support for the Egg King ban to gain a few votes on another farm bill issue.

Despite USDA's perfidy, Mr. Maynard, with the help of Rep. Robert Badham, the California Republican in whose district Mr. Maynard resides, won a narrow vote to remove the amendment before final House passage of the farm bill. But Mr. Maynard can't rest just yet: the issue now moves to the Senate, where UEP has pressed, so far unsuccessfully, for a similar provision.

And Mr. Maynard's apparent victory hasn't come cheap. He figures it cost him more than $100,000 to hold off the UEP, a paltry sum for an industry trade association, perhaps, but a lot of money for a small business.

Says Mr. Maynard: "Never in my wildest fantasies did I think they would be able to legislate me out of business."

But they almost did.

Unfortunately, throughout the economy, businesses are increasingly turning to politics to gain a profit. Over the last 10 years the number of Political Action Committees has jumped seven-fold, the majority of trade associations have shifted from New York to [illegible]ington, and the percentage of [illegible]rate CEOs regularly visiting the nation's capital has jumped from roughly 15 percent to 65 percent.

Mike Maynard exemplifies what is great about America's economic system, developing the proverbial "better mousetrap." We need to protect the Mike Maynards of America, rather than forcing them to spend tens of thousands of dollars to protect themselves from attacks by politically influential special interests.

The issue is moral as well as economic. For if we lose the basic right to make a living without having to obtain permission from our competitors and the government, we will lose the philosophical basis for our economic and political system.

Doug Bandow, a senior fellow at the Cato Institute, is a nationally syndicated columnist.

Egg Breakers Scramble For Farm Bill Protection

Hill Panel Would Ban Mechanical Separator

By Ward Sinclair
Washington Post Staff Writer

California businessman Mike Maynard, inventor of a machine he calls the Egg King, was shell-shocked when he heard about the pending House farm bill.

At the behest of the egg-breaking industry (no yolk—there is such a thing), the House Agriculture Committee put language in the bill that would outlaw the use of Maynard's competing Egg King.

With the backing of the Agriculture Department, the United Egg Producers, which represents the egg breakers, got Rep. Lindsay Thomas (D-Ga.) to sponsor their proposal to keep the business all to themselves.

And we're talking big business here. The egg-breaking industry is a billion-dollar-a-year enterprise, providing liquid, frozen and powdered eggs to food processors, bakeries and eating establishments that require large amounts.

The breaking plants, under USDA inspection, are allowed to use low-grade and damaged eggs that cannot be sold at retail. Maynard stipulates that only sanitized, high-grade eggs, which will be baked or cooked, can be used in his Egg King.

Maynard's centrifugal-force contraption, which separates shell and membrane from the white and yolk, gives egg users another option. He has sold 700 Egg Kings to restaurants, bakers and other food handlers who use them to crack the fresh eggs they prefer for their confections.

They like Maynard's machine because it eliminates the drudgery and cost of hand-breaking of eggs and allows them to use fresh eggs in the precise amounts they want instead of having to buy the prebroken commercial product.

"It gives them a superior product by allowing them to use fresh eggs and it gives them cost savings, because fresh eggs are cheaper," Maynard said.

But Thomas argued that machines such as the Egg King do not allow inspection of the content of individual eggs, as required by the Egg Products Inspection Act, raising the specter of salmonella infections and other threats to public health. Even though there is no record of problems where it is used, the committee agreed and decided that the Maynard machine was "inherently unsafe."

That sent Maynard scrambling for help.

The Retail Bakers of America, the American Hotel & Motel Association and the National Restaurant Association have joined him in trying to undo the committee proscription of the Egg King. Maynard's congressman, Rep. Robert E. Badham (R-Calif.), has prepared an amendment that would overrule the committee and leave the Egg King sunny side up.

"It would be folly to impose such restrictions on thousands of current and potential users of these egg machines based on unproven claims by competitors that such machines are a health threat," Badham said.

"The House Agriculture Committee passed this provision by voice vote without conducting any hearings, and it would be unwarranted for the Congress to outlaw use of this new technology without any evidence that it is unsanitary."

Reading the fine print, the committee might just have bitten off more than it intended. The farm bill bars commercial processing of any eggs for human consumption in any way that does not allow examination of the content of the egg.

That could mean Congress is decreeing an end to the soft-boiled egg, the hard-boiled egg and the pickled egg at your corner eatery.

LOS ANGELES TIMES BUSINESS SECTION - Tuesday, October 8, 1985

Bill Would Have Banned Use of Machine

Egg King Gets Reprieve in Congress

By ROBERT HANLEY, *Times Staff Writer*

A Tustin-based company whose only product is a machine that can break as many eggs in a minute as a person can in an hour got a new lease on life Monday. The reprieve came when the U.S. House of Representatives killed an amendment to the 1985 farm bill that was designed to block use of the Egg King device.

The Egg King, a 3-foot-high, canister-shaped machine built by MISA Manufacturing Inc., uses centrifugal force to break eggs and separate their contents from the shells at a rate of about 360 eggs every 30 seconds.

Since its invention four years ago, 700 hospitals, restaurants and bakeries nationwide have bought the machine, settling the dilemma between breaking fresh eggs one at a time or buying the liquid, frozen or powdered product marketed by the egg industry.

Not everybody likes the machine, however.

After some prodding by the United Egg Producers, the House Agriculture Committee in July added an amendment to the farm bill that would have prohibited egg processing in a manner that mixed shells with the whites and yolks or that "does not allow examination of the content of individual eggs being processed."

Officials of the 900-member industry group argue that the Egg King could contaminate food and might lead to the outbreak of diseases such as salmonella, because the device crushes the eggs whole before removing the shells from the liquid.

"It always poses a health hazard whenever you mix the shell with the meat of the egg itself," said Al Pope, United Egg Producers' president. "Feathers, manure and all that stuff from the farm mixes with the liquid egg."

Karen Darling, the Agriculture department's assistant secretary for marketing and inspection services, agrees the machine could pose a health hazard. Even if the eggs have been washed before being fed into the machine, she said, the shells still can harbor salmonella bacteria.

Moreover, Darling said, the method makes its difficult to detect a rotten egg, posing the danger that bad eggs will be mixed with good ones. "Our concern," she said, "is not really with the machine but with the product it generates."

But Mike Maynard, Egg King's inventor and MISA's president, counters that "if the machine is used properly, there is no problem."

A warning label on the device cautions that only eggs graded B or higher can be used and that the eggs must be washed in accordance with USDA standards to minimize risk of contamination.

Maynard said efforts to limit Egg

Please see EGG, Page 5

EGG: Reprieve

Continued from Page 2

King use are anti-competitive and are spearheaded by processors of low-quality eggs—eggs that most often are used in powdered and frozen egg products.

"The egg producers have been slanderous. They've been going around to the customers and telling them that the machine is going to be outlawed and that it's unsafe," he said. He blamed the egg producers' campaign for a drop in production of Egg Kings to 10 or less units a month from an average of 60 units a month last year.

The egg producers may take a second crack at the Egg King when the farm bill hits the Senate, possibly later this month. But Maynard instead is hoping that sales levels recover.

"I think the way it turned out today, we ought to be back on our projections within about 60 days. Now it's strictly upward and onward," he said. "We had a lot of customers who were waiting for the clouds to clear."

11/19/85

UPDATE: EGG MASTER

Criticism still bedeviling Tustin-made machine

Just when it seemed the battle was over, another debate is boiling over the safety of the Tustin-made Egg Master machine built by MISA Manufacturers.

The fate of the egg-crushing machine could ride on the outcome of a hearing before the U.S. House of Representatives Subcommittee on Livestock, Dairy and Poultry Nov. 21.

The subcommittee will advise the United States Department of Agriculture and the Federal Drug Administration on the safety of the machine, which was invented by Michael Maynard of Garden Grove.

United Egg Producers, a Georgia-based trade group, contends the Egg Master could produce poisonous salmonella bacteria because it crushes eggs and shells together, and eggshells can harbor bacteria. The machine separates the shell from the rest of the egg by centrifugal force.

Abby Sutherland, legislative director for United Egg Producers, said the company's board will continue to pursue getting the machine outlawed, even if it's given a clean bill of health from the USDA and FDA.

Last month, the Agriculture Department backed a six-line amendment to a 525-page farm bill that would have outlawed the Egg Master for safety reasons. After a 45-minute debate on the House floor, the amendment was defeated by a 29-20 vote.

Maynard, also president of MISA, said claims that his machine is not safe are "merely accusations."

"The United Egg Producers would not accept the results of the debate last month, so they convinced some members of Congress to rediscuss the issue," Maynard said.

"There's never been an illness reported and the machine has been used by an excess of 800 users in the span of four years."

Sutherland said the trade group is not aiming to put MISA out of business, but to protect the safety of users.

"We send our eggs to a processor before they go to the bakeries and it's much cheaper," she said. "If the machine was safe, we want everyone to have one. But it's not safe and people are going to get sick and become afraid of eggs."

Maynard said that compared with egg-crushing machines that don't use centrifugal force, his machine is more sanitary.

"The other machines in the plants break everything from the inedible eggs, cracked and dirty, to grade A and B eggs. Our machine was tested for salmonella in the state of Hawaii and our eggs are inspected internally and cleaned before they're broken."

Marilyn Batchelor/The Register

Sept.), 1985.

Dear Bill -

Our short visit was like old times. Since so much water has passed under the bridge, it gave us the opportunity to evaluate our current thinking. I had clipped the Sunkist story and was debating how to use it. But I am still concerned about your thinking on Urner-Barry.

Currently I would suggest a re-evaluation of your thinking, and hope you are not out front promoting their thing. When you look at their history you will find that Urner sold at a time when there was really no free trading, even the futures finally folded. Urner covered actual street trading on foot for years and used his judgement in reporting the price. Over the years nothing but an honorable service. When he sold, it went to two ex-government New York Market News men. The national Egg Market News supervisor is an ex-officer-in-charge of the New York office. This makes an interesting combination, since the sale, the US government NY reports have never varied from UB, for it uses UB for the low side ~~of their~~ report. Washington figures it covers their ___ ~~from the~~ taint of making a market.

Therefore, UB is protected and authenticity is established by involving the government. This makes for a nice power structure, whether the marketing order goes or not - but to function, there is no way short of a shooting war that UEP will eleminate surplus. They must have a government support valve to skim it off, but to have it available to pressure any independent price breaking action in the US. The West Coast, up to now, has screwed up UEP's national cartel dream; but independent producers have and are paying their way, going out of business. Damn few of us left.

Two things are becomming inevitable. First, one of the major retailers will buy a block of cartons and go out for a flat price bid of four to six months to fill their needs. This will put an uncontrollable price out that UEP will not be able to cover as is done now; look at the only level of trade and volume recognized. Second: Our so called leaders will switch and finance foreign suppliers - exports are not the serious potential problem that imports are to independent producers.

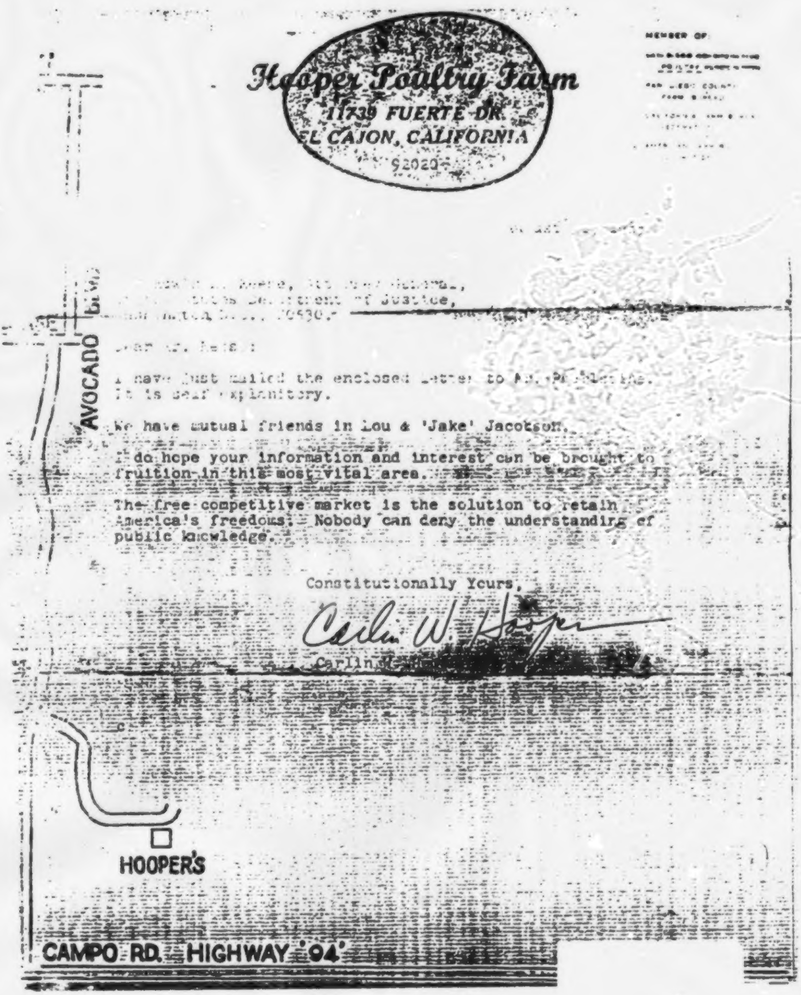
Your position is a real squeeze position and you are the only one ~~that could deliver the West Coast; but be sure and tighten your~~ Golden Parachute, and please make sure all shroud lines are complete, for they are just using you for their ends.

I plan to be at your meeting on the 25th.

But, who knows between the Justice Dept., and IRS, we might muddle thru yet, as it certainly cannot correct itself.

Sincerely,

Carli



Hooper Poultry Farm
11739 FUERTE DR.
EL CAJON, CALIFORNIA
92020

MEMBER OF:

[illegible]

Edwin [illegible] Meese, Attorney General,
United States Department of Justice,
Washington D.C., 20530.

Dear Mr. Meese:

I have just mailed the enclosed Letter to Mr. President. It is self explanitory.

We have mutual friends in Lou & 'Jake' Jacobson.

I do hope your information and interest can be brought to fruition in this most vital area.

The free competitive market is the solution to retain America's freedoms. Nobody can deny the understanding of public knowledge.

Constitutionally Yours,

Carlin W. Hooper

Carlin W. [illegible]

San Diego County Farm Bureau
1670 EAST VALLEY PARKWAY, ESCONDIDO, CA 92027-2498

AFFILIATED WITH
CALIFORNIA FARM BUREAU FEDERATION, SACRAMENTO, CALIFORNIA
AMERICAN FARM BUREAU FEDERATION, CHICAGO, ILL. & WASHINGTON, D.C.

TELEPHONES
(619) 745-3023
(619) 753-7000

September 12, 1985

Dear Poultryman,

The second reading of the "Fly Abatement And Control Ordinance" will be held on Tuesday, September 17, 1985 before the County Board of Supervisors. We should be there at 8:30 a.m. and show our strength by a large turn out.

This meeting is an extremely important one, and we hope you will attend. Our request will be to ask for a 60 day extension on the second reading so that our attorney Jim Chaney will have an opportunity to thoroughly study it. We feel this is a reasonable request because of the major adverse impact it will have on our industry.

At the second reading an ordinance becomes law unless the supervisors vote it down or make major changes. In either case, the procedure starts all over again, if not dropped.

Mr. Chaney, and Farm Bureau's Charles Woods, feel certain that a large turn out is vital to our chances of getting the extension. Chaney and Woods will be prepared to speak if allowed. It will be up to Chairman Leon Williams to decide who, if any, will be allowed to speak.

Please plan to be there and bring your friends. Thank you very much.

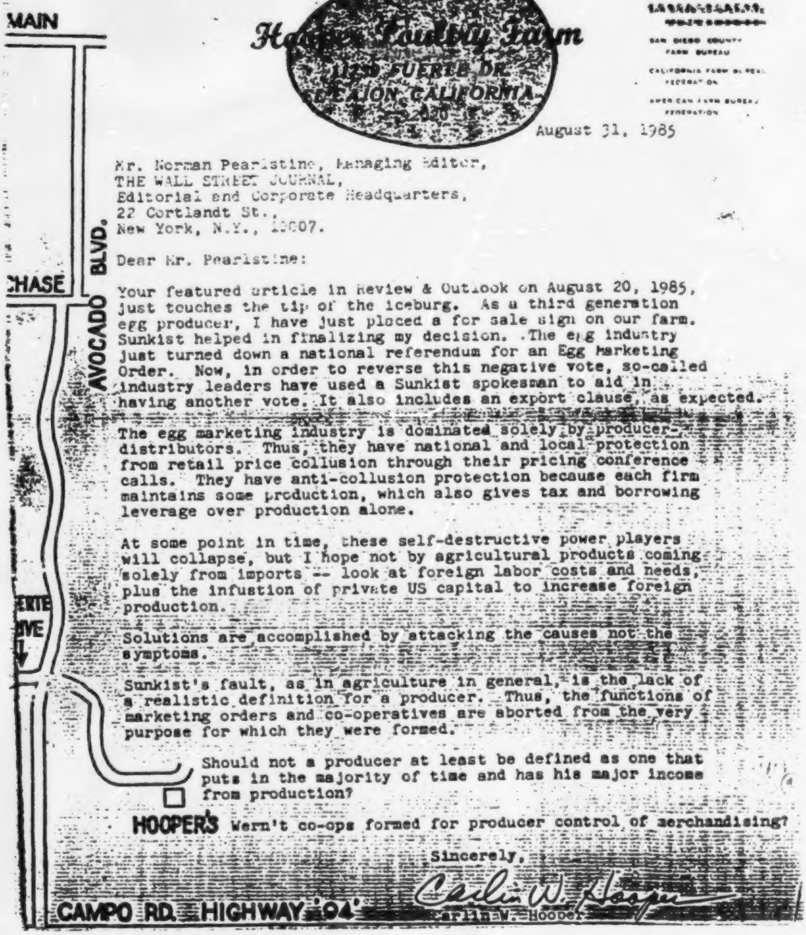
Very sincerely,

Carlin — Bill

Carlin Hooper, Co-chairman — Bill Wilgenburg, Co-chairman
444-7732 — 745-5689

Hooper Poultry Farm
1120 FUERTE DR.
EL CAJON, CALIFORNIA
92020

MEMBER OF:
[illegible]
SAN DIEGO COUNTY
FARM BUREAU
CALIFORNIA FARM BUREAU
FEDERATION
AMERICAN FARM BUREAU
FEDERATION



August 31, 1985

Mr. Norman Pearlstine, Managing Editor,
THE WALL STREET JOURNAL,
Editorial and Corporate Headquarters,
22 Cortlandt St.,
New York, N.Y., 10007.

Dear Mr. Pearlstine:

Your featured article in Review & Outlook on August 20, 1985, just touches the tip of the iceburg. As a third generation egg producer, I have just placed a for sale sign on our farm. Sunkist helped in finalizing my decision. The egg industry just turned down a national referendum for an Egg Marketing Order. Now, in order to reverse this negative vote, so-called industry leaders have used a Sunkist spokesman to aid in having another vote. It also includes an export clause, as expected.

The egg marketing industry is dominated solely by producer-distributors. Thus, they have national and local protection from retail price collusion through their pricing conference calls. They have anti-collusion protection because each firm maintains some production, which also gives tax and borrowing leverage over production alone.

At some point in time, these self-destructive power players will collapse, but I hope not by agricultural products coming solely from imports -- look at foreign labor costs and needs, plus the infustion of private US capital to increase foreign production.

Solutions are accomplished by attacking the causes not the symptoms.

Sunkist's fault, as in agriculture in general, is the lack of a realistic definition for a producer. Thus, the functions of marketing orders and co-operatives are aborted from the very purpose for which they were formed.

Should not a producer at least be defined as one that puts in the majority of time and has his major income from production?

Wern't co-ops formed for producer control of merchandising?

Sincerely,

Carlin W. Hooper
Carlin W. Hooper

(Additional material is held in the committee files.)

Mr. VOLKMER [acting chairman]. Thank you very much, Mr. Maynard.

Mr. Murphy, do you have a statement?

STATEMENT OF JOSEPH M. MURPHY, ATTORNEY AT LAW, NEWPORT BEACH, CA, REPRESENTING MiSa MANUFACTURING, INC.

Mr. MURPHY. Yes, thank you, Mr. Chairman. My name is Joseph Murphy. I am an attorney at law from Newport Beach, CA, and the attorney for MiSa Manufacturing Co. I thank the subcommittee for the opportunity to appear this morning and offer my testimony. I wish to submit my statement with accompanying documents for the record.

While listening to the other witnesses this morning, it is obvious that this subcommittee is concerned about a number of things, but principally the health of the American public, and we join in that concern. Mr. Maynard, his company, myself, we are as concerned about the health of the American public as any member of this subcommittee.

There is another concern, and that is this jurisdictional conflict, and I would submit to you that since the Egg Products Inspection Act was enacted in 1970, there were no jurisdictional disputes between FDA and USDA. They worked very closely on this inspection act in their own particular categories. The problem came up only when the United Egg Producers, in their desire to put this man out of business, went to the Agricultural Marketing Service and asked the Agricultural Marketing Service to intervene on their behalf to outlaw this machine.

Now I think, in order to understand the interdepartment relationships, I think we have to get rid of this confusion with respect to this so-called unfair rule between what is required of an official plant and what is required of a food service establishment. An official egg-breaking plant breaks eggs of inferior quality—garbage eggs, in many instances, eggs that have been returned, that are not saleable in the marketplace. Because they break these eggs, and because they break these eggs for resale, the rules and regulations that apply to them are far different than the food service establishment, bakery or restaurant, that breaks their own fresh eggs for immediate preparation in a food product or a baked product. Mr. Maynard developed his machine not for an egg-breaking plant; he developed his machine as a superior alternative to what was existing in food service establishments prior to the introduction of the machine, and that is hand breaking of eggs.

I have heard a lot of concern this morning about salmonella that occurred in New Jersey. We have no facts about that. Everybody in this town knows about that except the manufacturer of the machine. We intend to do a thorough, thorough investigation, and will make our report available to this committee. I ask that my statement can be kept open for purposes of submitting that to the committee.

Since 1970, for the 15 years that the act has been in place, there have been numerous circumstances or situations in which people have become ill from salmonellosis as a result of ingesting eggs that were contaminated, but no committee hearings were held about that. FDA, USDA, handled the problem fine, until such time as the machine came on the market. This is not the first case of somebody having become ill. Just before the hearing that we had on the House floor several months ago, there was an outbreak very close by in Maryland that was attributable to hand breaking of eggs, so the problem is not new. The problem is not going to be solved by outlawing this machine.

We welcome a scientific study of the machine. We welcome any suggestions on what we can do to improve the machine. What we do object to is a scientific or, as I call it, an unscientific polling of members of the scientific community who will be testifying later today. I don't attack their credibility. These are very, very fine gentlemen with impeccable reputations in the scientific community but what they were asked to do was to comment on USDA's position which, at that time, during one of their flip-flops, represented a view that was slanted toward United Egg Producers.

They did not tell the scientific people that this machine had been approved by the Food Sanitation Inspection Service of the Agriculture Department—not AMS. There is inspection. There is a machine, equipment branch in USDA. That's in the Food Sanitation Inspection Service. They have all of the facilities to test this machine or any other machine, and in fact this machine was submitted and was approved for a USDA meat and poultry plant under existing law.

We have had conversations this morning or testimony this morning about instances where the machine had been misused, but in all of those cases—and we may well find out the situation in New Jersey—if the poisoning actually came from the machine, it was because of the mishandling of the machine, much like a death will occur because of a drunk driver who doesn't handle his machine properly, but we don't outlaw automobiles.

We would welcome any opportunity to work with this committee, to work with the Food Sanitary Inspection Service of USDA, or FDA. The National Sanitation Foundation, which has equipment approval, we have already applied to NSF for criteria for use of this machine as an egg-breaking machine. The National Sanitation Foundation is controlled or the board of directors are made up of people from the industry and from the Department of Agriculture and the FDA.

So there are many ways that this machine can be evaluated scientifically, can be tested and approved for use in food service establishments. There are more than sufficient laws to ensure that it is used in a sanitary and proper manner in the field, and if it is not, if a user of the machine uses the machine in an improper manner, he is going to be cited. He is subject to criminal penalties, and the product that he produces, he may well become an official plant and be subjected to the same rules at an official plant, because that's what the law says. There is nothing lacking in the law. There is nothing in the law that says you have to visually inspect an egg when you break it.

I wish only to address one other point. United Egg Producers seems to be concerned about the reputation of the egg producers because of a possible salmonella outbreak. I submit to you that if somebody gets ill in a restaurant because of some food that they ate, it is the reputation of the restaurant that is at stake.

I also wish to make one other point, and then I am through and prepared to answer any questions that the subcommittee might have. That is, we talk about not being able to trust the food service establishment operator to properly operate this machine, yet we permit—under a very, very strict law—the United Egg Producer members to inspect their own eggs to be sold into commerce. Now either we are going to trust people in business or we are not going to trust people in business. It's as simple as that, gentlemen.

Thank you.

[The prepared statement of Mr. Murphy follows:]

JOSEPH M. MURPHY
ATTORNEY AT LAW
4000 MACARTHUR BOULEVARD, SUITE 990
NEWPORT BEACH, CALIFORNIA 92660

714/851-9328

November 18, 1985

The Honorable Tony Coelho
U.S. House of Representatives
Chairman, Subcommittee on Livestock,
  Dairy and Poultry
Room 1301, Longworth House Office Bldg.
Washington, D.C. 20515

Dear Mr. Chairman:

I respectfully offer my views in support of the centrifuge method of egg breaking in meat and poultry plants, restaurants, bakeries, and other food service establishments now under consideration by your committee. I am the attorney for MISA Mfg., Inc., presently the only manufacturer of such a machine.

The Egg King, manufactured by my client, MISA Mfg. was not designed to break reject eggs in official egg-breaking plants. Rather, it is offered as a superior alternative to other methods employed to break fresh eggs in the thousands of exempt food service establishments which prefer use of fresh eggs over commercially prepared liquid, frozen or dried egg products. Those that oppose use of this machine insist upon comparing it with processes employed in official egg-breaking plants. They consistently refuse to compare the machine with present methods employed in exempt food service establishments. Their reason is very simple. To do so would cause them more harm than good because the health problems they raise, if valid, originate from the egg and not the machine, or alternatively, are not really problems after all - if viewed in proper perspective. Liquid, frozen and powdered egg products produced for resale can only be produced in an official egg-breaking plant under continuous supervision of a USDA inspector. Only official egg-breaking plants are permitted to break eggs which fall between those eggs unfit for human consumption on the one hand, and the high-quality eggs suitable for sale in commerce on the other. (Grade B or better.) Because they are permitted to use dirties, leakers, checks, and eggs with strong odors, stringent regulations under authority of the EPIA were developed to control the wholesomeness of the liquid, frozen or dried egg products produced in these plants for resale.

Restaurants, bakeries and other food service establishments are not permitted to resell eggs they break. Moreover, if they break eggs other than Grade B or better they lose their exemption and are then subject to continuous inspection and/or criminal penalties.[1] In order to assure compliance with the EPIA, these exempt establishments are subject to inspection and regulation by the Food and Drug Administration[2] and state and local health authorities. (Not USDA.)

Any evaluation of the Egg King machine must be done in light of the reasoning behind the different rules applicable to official plants and exempt establishments. An analysis of these differences as applied to the issues raised in this debate are as follows:

1. PASTEURIZATION - It is undisputed that salmonella is a pathogenic bacteria inherently associated with shell eggs.[3] It is equally undisputed that the lower the quality or the older the egg, the higher the probability of contamination, both on the exterior shell as well as in the liquid. Further, it is well accepted that the salmonella bacteria will multiply more rapidly in egg liquid than on the shell.

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[1] 21 USC 1034, 1037, 1041, and 1044

[2] 21 USC 1034(d)

[3] Microbial Ecology of Foods, Vol. 2 (1980) pg. 537

It is for these reasons that liquid, frozen and dried egg products to be resold in commerce must be pasteurized immediately after breaking. Salmonellae are ordinarily destroyed if subjected to 140° for 3.5 minutes.[4] At higher temperatures, the salmonellae bacteria are killed more quickly, i.e., at 300° destruction occurs almost instantly.[5] In an official egg-breaking plant, pasteurization must be done at the very minimum temperature so as to avoid cooking of the egg, it being the function of the egg-breaking plant to produce a raw egg product, not a cooked product. The exempt food establishment, on the other hand, breaks eggs to cook, bake or use as an ingredient in other food products to be cooked or baked. Cooking or baking temperatures in these establishments are considerably higher than the minimum required for pasteurization, thus salmonella, even if it exists in greater quantity, would be destroyed. A more proper comparison of the centrifuge method would be to compare mass breaking by the centrifuge method to other methods used in restaurants, bakeries and other food service establishments, both before and after enactment of the EPIA. It is this and only this segment of the market that the inventor of the Egg King sought to improve upon. Prior to the Egg King, eggs were broken in mess halls, restaurants, bakeries and other food service establishments by hand or by machines such as the Hobart Mixer. As already testified to, the Egg King compared with hand breaking is more efficient, more cost-effective, and results in producing a product far superior to frozen or powdered eggs. Yet, with over 700 machines in use for over four years, now breaking more than 1 million eggs a day, not one case of salmonellosis has ever been attributed to ingesting of food product made with eggs broken in the Egg King machine. The reason is simple, cooking and baking destroys salmonella.

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[4] 7 CFR 59, 570

[5] Admission by Dr. Houston, FSIS Administrator

2. COMINGLING - Much has been said about the evils of the comingling of egg shell and egg liquid. To see the weakness of this argument one need only visit an official egg-breaking plant and inspect the filters in the system. They are covered with shell fragments over which the liquid passes as it goes through the system. These shells, however, unlike shell fragments in the centrifuge, come from low-quality eggs where the probability of greater contamination is considerably higher. The fact that comingling of shell and liquid does occur in official plants is clearly evident from a reading of several sections from the Code of Federal Regulations governing such plants, to wit: 7 CFR §59.520(h), "Strainers, filters or centrifugal clarifiers of approved construction shall be provided for the effective removal of shell particles and foreign materials, . . ." and 7 CFR §59.522(v), "Strainers, clarifiers, filtering and other devices used for removal of shell particles and other foreign material shall be cleaned and sanitized each time it is necessary to change such equipment, but at least once every 4 hours of operation.", and §59.522(aa)(2), "Systems for pumping egg liquid directly from egg breaking machines shall be . . . designed to minimize the entrance of shells into the system". (Please note that §59.522(h), supra, contrary to USDA denials, specifically approves the use of centrifugal clarifiers.)

The bottom line, in spite of USDA's dogmatic opposition to the comingling of shell and liquid, is that **no health hazard exists as a result of comingling.** Regulations require pasteurization of liquid egg products produced in official plants.[6] The manufacturer of the Egg King requires cooking or baking of liquid produced from its machine at temperatures in excess of the minimum required for pasteurization. **Pasteurization, cooking or baking destroys salmonella.**

Those that hand break eggs are neither regulated by USDA nor guided by instructions with respect to pasteurization, yet surprisingly UEP has never demonstrated any concern for the health of the American public from this potential source of salmonellosis. Could it be that there is no threat to the public health, or is it simply that hand-cracking operations do not pose a competitive threat to the frozen and powdered egg industry as does this machine?

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[6] 7 CFR 59, 570

Congressman Lindsay Thomas argued, during the recent floor debate on this same subject, that salmonellae lurk deeply hidden in the pores of the egg shell, impervious to sanitizers. If this is true, we may well have a serious threat to the health of the American public. If, as Mr. Thomas stated, the salmonellae are released when the shell is broken, they will be likewise released when the egg is broken at home, in a restaurant, in an official egg-breaking plant, as well as in a centrifuge. **The threat comes from the egg, not the machine.** However, I question the validity of this argument for several reasons. First, the Health Department of the State of Hawaii conducted extensive tests of the Egg King under actual field use conditions. The Hawaii tests (report attached hereto) show no salmonella present in any of the 124 samples taken. Secondly, bacteria can only reach the pores of the egg shell, thus avoiding destruction by sanitizers, after a breakdown of the egg's outermost shell, known as the cuticle. The cuticle affords protection against bacteria penetration for up to four days after laying.[7] I have been informed, that in practice, eggs are sanitized virtually within hours after laying. If this is not the case, regulations requiring prompt sanitation should eliminate, or at least minimize the problem. Moreover, if such a real threat does exist, this committee may want to consider the source of the salmonella - chicken feed - as pointed out by Congressman Neal Smith during the same floor debate. In any event, the problem appears to be academic because **salmonellae are destroyed by pasteurization, cooking, or baking.**

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[7] Microbial Ecology of Foods, Vol. 2, (1980) pg. 526

3. ORGANOLEPTIC INSPECTION - Title 7, Code of Federal Regulations, Part 59, subsection 522(f) requires that shell eggs in an official plant "shall be broken in a satisfactory and sanitary manner and inspected for wholesomeness by smelling the shell or the egg meat and by visual examination at the time of breaking." (In reality, these procedures are not followed as can be demonstrated by a videotape that will be made available to the committee upon request). The reason for this is patently obvious. Egg-breaking plants came in existence because of the need to salvage eggs of such low quality that they were not otherwise saleable. It is because of this low quality of eggs used, that visual inspection of individual eggs was mandated. Moreover, it was partly the unsanitary procedures employed by egg breakers prior to 1970 that gave rise to the enactment of the Eggs Products Inspection Act in the first instance.

The extent of organoleptic examination required in restaurants, bakeries and other food service establishments which break fresh eggs is necessarily different because there only high-quality eggs are used. The simple procedures set out by the manufacturer for use of the machine assures a far more wholesome end product than the procedures mandated for an official plant. For reference, the manufacturer's instructions are as follows:

*Carefully review instruction manual before using.

*Use only USDA sanitized eggs, grade B or better.

*Visually inspect eggs using the plastic flat provided. Invert eggs to enable you to visually inspect top and bottom of eggs for dirt, broken shell, or foreign material in egg flat.

CAUTION - If eggs are dirty or cracked, DO NOT USE! Return to egg supplier for refund (or credit).

*Use liquid egg mixture only in products to be cooked or baked for at least 3.5 minutes as a temperature of 200° or higher.

*Organoleptically inspect (sight and smell) liquid at the discharge spout. If you detect abnormal color or smell, reject that batch and return to supplier. (Clean and sanitize equipment prior to continued use.)

*Best results are achieved if eggs are broken immediately prior to use.

*Unused liquid egg must be immediately refrigerated, below 38°F. (Do not freeze.)

*For use in uncooked end products, use pasteurized eggs or hand crack your eggs.

*At the end of each cracking period or four hours, clean machine as per instruction manual.

To bring this comparison into better focus, a quick review of grading standards[8] is appropriate. As stated, restaurants, bakeries and other food service establishments are exempt from the EPIA only so long as they use eggs graded B or better. To be graded B, a case of 360 eggs cannot contain more than 36 checks, 1.8 leakers, dirties or loss combined, only one egg containing blood or meat, but no other types of loss eggs. Following the manufacturer's instructions, the checks, dirties, and leakers would all be removed. The one egg in 360 containing blood or meat could not be visually detected.[9] However, if a rotten egg were present, it would be detected by smell, not only by the machine operator, but by anyone within close proximity of the machine. Contrary to what opponents of the machine would have you believe, organoleptic inspection of eggs by users of the machine does exist. The manner of the inspection matches the circumstances, as good common sense would dictate. Admittedly, it is not the same procedure as mandated (but not followed) for official plants, but, as set forth above, the circumstances do not require

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8. 7 CFR 56, 216
9. [". . . a blood spot indicates that the egg is fresh. Both chemically and nutritionally . . . eggs are fit to eat."] Eggcyclopedia, American Egg Board, (1980)

that it be.

Hand breaking, on the other hand, does permit visual inspection of each egg as it is broken. But, by the time you detect a bad egg, assuming you ever get one, it's already in the bucket. In order to appreciate this fact, you must visualize a hand-breaking operation. The typical operation consists of three or more people sitting around a large bucket, each breaking eggs, two at a time, as fast as he or she can. Hands are dripping with egg liquid which in turn comes in contact with the shell. The bottom of the bucket is covered with egg shells that accidentally fall in. The length of time required by three or four persons to hand-break a case of eggs is far greater than by use of the machine, thus the temperature of the eggs goes up, giving rise to more breeding of bacteria in addition to added exposure time to airborne or human transmitted bacteria. In addition, hand breaking necessarily requires human contact with the food product, which as any scientist will tell you, is the most common means of cross-contamination in anv food processing establishment. Yet, hand breaking is condoned by the opponents of the machine. Why? Because hand breaking operations do not pose a threat to the powerful frozen and powdered egg interests that are behind the opposition to the machine. The machine, however, hits them squarely in the pocketbook.

4. LOOPHOLE - Opponents of the centrifuge technology claim that the use of the centrifuge method in food service establishments for egg-breaking purposes results from a loophole in the EPIA. This is simply not true. The laws as they exist today are more than adequate to regulate the safe and sanitary use of the centrifuge in food service establishments. The EPIA provides that restaurants, bakeries and other food service establishments are exempt from continuous inspection

so long as they use eggs graded B or better.[10] Further, the Act empowers the Food and Drug Administration to enforce the provisions of the Act with respect to exempt establishments,[11] and it contains criminal and other sanctions for violations.[12] In addition, the FDA is empowered, inter alia, under the Federal Food, Drug and Cosmetic Act[13] to establish regulations with respect to food handling and natural contaminants in food for human consumption. The problems, other than the competitive effect of this machine on the members of the UEP, under consideration by this committee are ones that can be adequately dealt with by the FDA under existing law. The FDA has consistently taken the position that the Egg King machine presents no present danger to the public health. In order to guard against potential danger that may exist however, FDA has been closely monitoring use of the machine. In addition, the manufacturer of the Egg King machine has in the past and will continue in the future to work closely with the FDA to assure that the machine is used in the most safe and sanitary manner possible. This is simply good business practice. The manufacturer has likewise attempted on numerous occasions to work with the Pacific Egg and Poultry Association (PE&PA) and United Egg Producer (UEP) members to assure safe and sanitary use of this technology. PE&PA and UEP have flatly refused to cooperate with the Egg King manufacturer. They have stated that they viewed the machine as unfair competition and have openly and boldly expressed their intention to legislate the company out of business.

The manufacturer's relationship with the USDA has been fully set out for this committee by Michael Maynard, President of MISA Mfg., Inc. I will only add my experience with USDA. It can be most amply demonstrated by relating my first encounter with H. Connor Kennett, of the Agriculture Marketing

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[10] 21 USC 1034(a), 1044
[11] 21 USC 1034(d)
[12] 21 USC 1037, 1041(a)
[13] 21 USC 301, et seq.

Service, over a year ago. After welcoming Mr. Maynard and I to Washington, Mr. Kennett set the tone for our relationship that followed. He said "I ain't never approved of the comingling of egg liquid and shell, and I ain't never going to, now let's talk." Mr. Kennett has never waivered. The USDA has, seven times, but they have never provided one shred of scientific evidence to support their opposition. On the contrary, Mr. Maynard and I variously met with Deputy Secretary Norton, Assistant Secretary Lett, Deputy Assistant Secretary Darling, Mr. Handley, Administrator of the Agriculture Marketing Service, (AMS), Dr. Houston, Administrator of the Food Safety Inspection Service, (FSIS), and Mr. McCutchon, Mr. Oyster, Dr. Rose and Dr. Skinner, all with FSIS. With the exception of Ms. Darling and Mr. Kennett, all others agreed that the use of the machine did not pose a health threat. Mr. Kennett alone voiced opposition to the machine. Ms. Darling stated that she had to rely on Mr. Kennett's judgment, implying at least, that she had no independent opinion on the subject.

5. THE "UNSCIENTIFIC"STUDY BY USDA - During the early debates preceding the floor vote on the Thomas Amendment the USDA conceded that it ought to undertake a scientific evaluation of the Egg King machine.

In early October, USDA sent out 17 letters to selected members of the scientific, academic and business communities obstensibly to solicit their views on "use of the centrifuge as an egg-breaker." Attached to each letter was a 2-1/2 page "Statement of Issue" (copies attached hereto). Sixteen responses were received. As can be seen, the letter and Statement of Issue were so slanted toward USDA's position that it would be unreasonable to expect any objective response.

For example, USDA failed to set out FDA's position regarding the machine, failed to advise that the machine had been in use for more than four years, that more than 700 machines are currently in use nationwide and that not one case of salmonellosis has been linked with eggs processed through the machine, but most importantly, that the machine was designed as an alternative to hand breaking in food service establishments exempt from the EPIA. (The reader is clearly led to believe that the machine is being offered for use in official egg breaking plants). The manufacturer was never asked to participate in the drafting of the letter or Statement of Issue.

I first read the letter and the 16 responses on November 14th when I received copies from USDA. I immediately drafted a series of questions and asked a MISA staff person to telephone the respondents (copy attached). We were able to poll only 10 of the 16, nonetheless the results were very interesting. Only one person had ever seen the Egg King machine; none had made any scientific comparisons with conventional hand-breaking methods or methods employed in official egg breaking plants; all agreed that grade B eggs were generally wholesome; none had any knowledge of illness caused by eggs broken by the centrifuge method; and, only three had referred to any scientific material before preparing their responses. One academician offered that he could show USDA how to properly sanitize eggs but was unwilling to do so without compensation. In short, the much heraled USDA study is a farce and a joke.

SUMMARY - The Egg King machine does not pose a public health threat. It does not add to or take away bacteria otherwise present in eggs fed into the machine.

If the eggs produced in this country are truly unsafe, banning the centrifuge technology will do nothing to change that fact. Either steps must be taken to assure that only wholesome and bacteria-free eggs are sold in commerce or fresh eggs should be outlawed entirely and everyone be required to use only eggs processed under the supervision of the Federal Government. I suspect this latter alternative would not sit well with the American public!!!

I leave you with one final thought - years ago, when canned cranberries were found to contain botulin poison, FDA banned the sale of cranberries; they did not outlaw cans, nor did they outlaw can openers.

Respectfully submitted,

JOSEPH M. MURPHY

JMM:km

(Attachments follow:)

APR 1 1 REC

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HAWAII 96801

LESLIE S. MATSUBARA
DIRECTOR OF HEALTH

In reply, please refer to:
EPHSD/

April 4, 1985

Mr. Dickey Nitta
Vice President
Rocky Road Products
Waimanalo, HI 96795

Dear Mr. Nitta:

The Department has completed its salmonella study for eggs broken by Egg Master, a centrifugal egg breaking machine.

The eggs sampled came from Rocky Road, Hawaiian Maid, and a "mainland" distributor. Sampling was done in situ at three hotel kitchens.

Samples were drawn as follows:

1. One hundred twenty-four (124) samples of 100 grams each from 41.5 cases of freshly broken eggs using Egg Master machine.
2. Ten (10) samples of 100 grams each from stored refrigerated fluid eggs.
3. Nine (9) samples of broken egg shells.

No salmonella was found in any of the samples.

The Department concludes that the Egg Master is capable of producing a safe egg product. It is stressed, however, that the operator of the device also has a role in the safety and wholesomeness of the egg product. Please continue to inform your Egg Master customers of the operation and maintenance requirement of the machine. We have no objections to its continued use.

Sincerely yours,

MELVIN K. KOIZUMI
Deputy Director for Environmental Health

MKK:lc
cc: Division Chief, EPHSD
Chief, Sanitation Branch

SEP 27 '85 08:29 PRU _ORP NPB

P.9

JAN -7 '85

[illegible]
[illegible]

Leslie S. Matsubara
[illegible]

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX [illegible]
HONOLULU, HAWAII [illegible]

January 2, 1985

In reply, please refer to:
File:

MEMORANDUM

To: Deputy Director for Environmental Health

Through: Chief, Sanitation Branch
Chief, Environmental Protection and Health Services Division

From: Supervisor, Kapahulu Section

Subject: Laboratory Analysis for Salmonella of Eggs Broken by Centrifugal Egg Breaking Machines

Purpose: The purpose of this study is to determine whether or not there would be a health hazard by utilizing centrifugal egg breaking machines.

Procedure:

1. Eggs from three food service establishments to be monitored:
   a) Hilton Hawaiian Village
   b) Hawaiian Regent
   c) Sheraton Waikiki

2. Three samples to be collected on separate work days.

3. Sampling:
   a) 1500 grams (approximately 30 eggs) to be collected via the delivery spout at intervals to obtain a composite sample.
   b) Crushed egg shell sample.
   c) 100 grams of refrigerated egg fluid (establishment which prepare eggs a day before use).

4. Sampling and laboratory analysis to comply with FDA Category 3 standards.

5. The month-long study to commence on January 7, 1985.

Irving Fukunaga
IRVING FUKUNAGA

IF:do

BEST DOCUMENT AVAILABLE

1 OCT 1985

Dr. Glenn W. Froning
Professor
Department of Food Science and Technology
134 H. C. Filley Hall, East Campus
University of Nebraska
Lincoln, Nebraska 68583-0919

Dear Professor Froning:

The Department of Agriculture (USDA) is seeking the views of scientists and food hygienists on a matter of developing interest in the Congress, various Government agencies, and the food industry. Because of your professional and technical background, you have been identified as particularly qualified to provide professional counsel to USDA concerning the acceptability of an egg processing procedure as it relates to food safety and wholesomeness. For this reason, we are writing hoping to obtain your assistance in this regard.

Enclosed is a background statement concerning the issue and the Department's position. There are some that do not agree with our position, so we are seeking your opinion on its soundness, objectivity, etc. We believe the statement contains sufficient information to permit the evaluation being requested. However, if additional facts are required, you may request assistance from Larry W. Robinson, Poultry Division, Agricultural Marketing Service, at Area Code (202) 447-3271.

We realize our request for assistance may not be timely for you. Unfortunately, proposed legislation regarding the matter is pending, and your views are needed by October 18, if possible. Your comments and counsel, based on your experience and technical knowledge, would be extremely valuable to us in this critical issue.

Thank you in advance for any assistance you may give us.

Sincerely,

James C. Handley

James C. Handley
Administrator

Enclosure

September 27, 1985

Statement of Issue
Regarding
Use of the Centrifuge as an Egg Breaker

The Egg Products Inspection Act was passed in 1970 to assure that eggs and egg products consumed by the public are wholesome and unadulterated. The Act established requirements for mandatory, continuous USDA inspection in egg products processing plants manufacturing liquid, frozen, or dried egg products, and placed restrictions on the eggs eligible for sale to consumers at retail. Similarly, eggs sold to or used by restaurants, bakeries, and other food manufacturing establishments must meet specific criteria to assure wholesomeness of products ultimately consumed by the public.

Predominantly, restaurants, bakeries, and similar food establishments either purchase egg products from officially inspected plants or hand-break shell eggs in the preparation of food. While the predominance of these established procurement and processing methods has not changed, egg processing techniques at some of these establishments have been altered recently with the introduction of equipment to break eggs en masse. Most of these situations involve the use of a centrifuge which is being marketed as an egg breaker.

In using the centrifuge, shell eggs are dumped directly from filler flats into an opening in the top of the unit. A spinning cylinder inside causes the eggs to be broken or crushed and the liquid is separated from the commingled mass by centrifugal force through holes in the cylinder wall. Resulting liquid is then drained from an outlet at the bottom of the outer cylinder into another container pending use in the preparation of food.

A majority of the centrifuge breakers used in the United States are manufactured by a single firm. Representatives of the firm have sought to obtain USDA acceptance or approval of the centrifuge for egg breaking purposes in meat, poultry, and egg products processing plants operating under mandatory USDA inspection. The machine is sanitarily designed, readily cleanable, and constructed of appropriate materials. These are not issues with USDA. However, the Department has declined the firm's request for approval of the machine for egg breaking for two food safety and wholesomeness reasons.

The first of these relates to the risk of Salmonella contamination associated with the commingling of egg shells and egg liquid that is inherent in the use of the centrifuge. The policy of USDA is to eliminate or minimize the potential for Salmonella contamination wherever possible in the processing of food. Since scientific studies have consistently shown that egg shells serve as natural harbors for Salmonella, we believe acceptable egg breaking procedures should minimize contact between the shell and inner liquid egg contents.

Secondly, breaking of eggs en masse in the centrifuge provides no opportunity for inspection of individual inner egg contents necessary for determination of wholesomeness. With few exceptions, once unwholesome or inedible eggs are mixed with wholesome product, the ability to detect the unwholesome condition no longer exists.

- 2 -

USDA egg products inspection regulations, applicable to egg products processing plants, require that eggs be broken individually and in a manner minimizing egg shell and liquid contact. Additionally, eggs must be individually inspected for wholesomeness and subsequently pasteurized to destroy viable Salmonella organisms before packaging and ultimate distribution for use in the preparation of other foods. While handbreaking of eggs is permissible, most commercial egg products processing plants utilize automated egg breaking machines capable of breaking eggs individually at high speeds. In this egg breaking process, contact between the shell and liquid is minimal, and the equipment permits necessary inspection of individual eggs by machine operators and segregation of unwholesome or inedible eggs when they are encountered.

Recently, an amendment to the Egg Products Inspection Act has been proposed that would prohibit any person from processing eggs for human food in any manner which (1) does not allow examination of the content of the individual eggs being processed, and (2) allows egg content to commingle with the shell or shell membrane during processing. If enacted, the amendment would prohibit the use of the centrifuge for egg breaking at any establishment. USDA has supported this amendment for the reasons stated above.

The centrifuge manufacturer strongly defends the use of the equipment as safe and fully conducive to the processing of wholesome product, particularly in view of precautionary instructions it has developed that accompany the unit when it is used as an egg breaker. These instructions are as follows:

- Use only USDA sanitized eggs, Grade B or better.
- Visually inspect eggs for dirt or broken shell. (CAUTION: If eggs are dirty or cracked, DO NOT USE!)
- Use liquid egg mixture only in products to be cooked or baked for at least 3.5 minutes at temperatures of 140° F. or higher.
- The liquid must be kept refrigerated.
- For use in uncooked end products, use pasteurized eggs or hand-crack your eggs.

Despite these instructions developed by the manufacturer to minimize risk, USDA remains concerned with the potential for Salmonella contamination and inclusion of inedible eggs with otherwise wholesome product when the centrifuge is used as an egg breaker. We believe scientific literature substantiates that washing eggs or rinsing them in a sanitizing agent is relatively ineffective in removing or destroying Salmonella when the bacteria are embedded in the shell. Also, all eggs used by bakeries, restaurants, and food manufacturing establishments are not washed and sanitized, and only a small percent have been USDA graded. Additionally, dust particles and other contaminants that come in contact with eggs and filler flats during normal transportation of eggs from packer to user location are not precluded from commingling with liquid egg in the centrifuge.

Also important, in our view, is that the U.S. standards for consumer grade shell eggs (U.S. Grades AA, A, and B) all include tolerances for cracked, dirty, leaker, and loss eggs. Tolerances were established for these types of eggs because, as a practical matter, they cannot always be detected and removed during grading, even in "state of the art" plants. Accordingly, we believe inspection of individual eggs after breaking is an essential step in assuring the wholesomeness of resulting egg products.

The Department is seeking opinions of qualified scientists and food hygienists concerning the scientific aspects of this issue. Particularly, we are interested in the views of these individuals, as they relate to the position USDA has taken on this issue and whether the position is supported by their knowledge of the matter and other information available to them. Additionally, we are interested in their views concerning the acceptability of centrifuge egg breaking as a food manufacturing practice in restaurants, bakeries, and similar food manufacturing establishments.

NAME ____________________________ COMPANY ______________________ TITLE __________

Phone No. ________________________ Interviewer ___________________ Date ___________

In early October, you received a letter from James C. Handley of the USDA in Washington, D.C. On ____________ you responded to Mr. Handley's letter. In that connection, I wish to ask a few questions.

1. Have you ever seen or operated the machine referred to in the USDA statement of issue? Yes ______ No _______

2. Did you make any scientific comparisons between liquid egg produced by use of the machine and (a) liquid produced by conventional hand breaking methods or, (b) liquid produced by methods employed in official egg breaking plants? If so, what were your findings?

3. Do you agree with the following?
   - (a) Shell eggs sold in commerce, Grade B or better, are generally wholesome? Yes ______ No ______
   - (b) Cooking or baking in excess of 200°F kills pathogenic (sommanella) bacteria and spoilage bacteria ordinarily associated with eggs and egg products? Yes ______ No ______

4. At any time prior to your answer to the USDA inquiry, did you discuss this matter with any other person? If so, whom?

   NAME ________________________ COMPANY ____________________ TITLE _______

5. Do you, of your own personal knowledge, know of any person who has become ill as a result of ingesting food containing egg from a centrifuge egg breaking machine? If so, please give details.

6. In preparing your response to the USDA inquiry, did you refer to any scientific material? If so, what?

2/20/85

WPMAIL -DSC -ECHO
MAIL ALL-DOS 'EGG MASTER'

FR: Office of Compliance, HFF-300

SB: Egg Master Machine, MiSa Mfg., Inc., Westminister,
California

TO: All Regional Directors
All District Directors

****

THIS MESSAGE IS BEING RESENT AS A CORRECTED COPY

****

We have received a number of complaints from W.E. Maynard, president of MiSa Mfg., and his attorney, Joseph Murphy concerning comments, written and oral, by our field people stating that the Egg Master egg extractor is "banned" and may not be used in food service establishements or other food establishments.

We have no proof that the machine itself contributes ~~no~~ any filth or food additive to the eggs. In fact it is stainless steel and is easily cleanable. While we recognize there is a potential for misuse of the machine by using eggs that may contribute filth to the liquid eggs, such adulteration would be caused by the user and not by the machine.

To ensure that the machine is not only used properly but also to avoid even accidental contamination, the firm is revising its instructions to state: (1) use only USDA sanitized eggs, Grade B or better, (2) visually inspect eggs for dirt or broken shell (caution: if eggs are dirty or cracked, do not use!), (3) use liquid egg mixture only in products to be baked or cooked, and (4) for use in uncooked end products, use pasteurized eggs or hand crack your eggs.

Since we do not have the authority to approve or disapprove Egg Master machine under any of the acts or regulations we administer, we should not be advising either state governments or firms that the machine is either banned or imply that it is banned by saying it is "not approved".

Instances of misuse of the machine should be documented and handled on a case by case basis. We will continue to review any studies that become available and any documented misuses to ascertain whether the actual or potential instances of adulterated eggs attributed to this machine are sufficiently isolated to warrant the issuance of a "Letter of Acceptance" as provided under IOM 312.13.

John M. Taylor

(Additional material is held in the committee files.)

Joseph M. Murphy
ATTORNEY AT LAW
4000 MACARTHUR BOULEVARD, SUITE 990
NEWPORT BEACH, CALIFORNIA 92660

714/851-9328

December 3, 1985

The Honorable Tony Coelho
U. S. House of Representatives
Chairman, Subcommittee on Livestock,
Dairy and Poultry
Room 1301, Longworth House Office Blvd.
Washington, D. C. 20515

Dear Congressman Coelho:

During the recent Oversight Hearings on the Egg Product Inspection Act by your sub-committee much was said, to the detriment of my client, about the Salmonella outbreak in Atlantic City allegedly caused by the Egg Master machine. This "outbreak" was conveniently kept under wraps until the day of the hearing despite our various and unsuccessful attempts to inquire into the matter.

Subsequent to the hearing Mr. Maynard and I went to Atlantic City, as promised, to investigate this "outbreak". Attached hereto, is a letter from the Health Officer for the city of Atlantic City which resulted from our preliminary investigation, and which completely exonerates the Egg Master as the cause of the Salmonella outbreak.

Exactly how Mrs. Nelson's defamatory and erroneous report found its way to your committee on November 20th is still a mystery, however I assure you my office will continue the investigation until we know who was behind this fraudulent report.

Very truly yours,

Joseph M. Murphy

Enclosures
cc: E. de la Garza
Edward R. Madigan
James M. Jeffords
Robert E. Badham
Douglas Bereuter
Harry Reid
Matthew J. Rinaldo
Don Ritter
Virginia Smith
Larry J. Hopkins
Arlan Stangeland
Steven Gunderson
Tom Lewis
Robert F. Smith
Harold L. Volkmer
James R. Olin
Timothy J. Penny
Charles Rose
Charles W. Stenholm
Thomas A. Daschle
Ed Jones
Berkeley Bedell
Glen English

John Norton, Deputy Secretary, USDA
Ray Lett, Assistant Secretary, USDA, MIS
Jim Handley, Administrator, USDA, AMS

CITY OF ATLANTIC CITY
Atlantic City • New Jersey • 08401

November 26,1985

M.E. Maynard, Pres.
Misa Manufacturing INc.
Egg King
14752 Franklin Avenue
Tustin, California 92680

C/O George Miller, Esq.
1421 Atlantic Avenue
Atlantic City, New Jersey 08401

Dear Mr. Maynard:

I am the Health Officer for the City of Atlantic City and am writing this letter in repudiation of a memo delivered to the esteemed Subcommittee on Livestock, Diary, and Poultry of the House Committee on Agriculture dated November 20,1985 authored by Denise Nelson, Chief Sanitary Inspector.

There is no confirming evidence linking the "Egg Master" egg extractor to an alledged Salmonella enteriditis outbreak. Additionally, the eggs were further processed after leaving the egg extractor. Not mentioned in the letter dated November 20,1985, is that there are people reported ill that insist they never ate on the premises. There is no assurance Harrah's Marina Hotel Casino was the site of an alledged outbreak.

The inspectors involved are qualified to note the condition of equipment as it relates to regulatory requirements. However they are not qualified epidemiologically to link the regulatory conditions with disease. Comments by the inspectors on the condition of the machine both on the basis of design and maintenance may be valid. However the position of the City of Atlantic City is that the condition of the Egg Master was coincidental to any alledged outbreak.

Prior to the writing of the memo, I read the draft. At that time I instructed the author to delete any linking of disease to the machine and to state that it is not the position of the City of Atlantic City that the machine is implicated in any outbreak. I was advised by Mrs. Nelson that the changes would be made, and that it was her personal opinion that the machine was involved.

If you have any further questions regarding this matter please do not hesitate to contact me. The entire investigation was overseen by the New Jersey State Department of Health.

Sincerely,

James L. Budd
Health Officer

JLB:pas

Mr. Volkmer. Thank you, Mr. Murphy.

The bells you are hearing are telling us we have a vote on. In fact, we are going to have two votes, one followed by another. We now have 10 minutes before the first vote.

Mr. Gable, can you do your statement in 5 minutes? If not, we will come back for your statement.

Mr. Gable. Certainly, yes.

Mr. Volkmer. Or 4 minutes, now, about.

Mr. Gable. It should be about four.

Mr. Volkmer. All right. At the end of your statement, then, we will recess until after the vote, and we will return, for other members if they want to go ahead and make this vote. All right, Mr. Gable.

Mr. Gable. Thank you, Mr. Chairman.

Mr. Volkmer. If you don't make it in 4 minutes, I'm going to cut you off. Go ahead.

STATEMENT OF WAYNE E. GABLE, DIRECTOR, TRADE POLICY, CITIZENS FOR A SOUND ECONOMY

Mr. Gable. I am pleased to be here before the subcommittee this morning, and I would like to present my testimony for the record.

On behalf of the 200,000 members of Citizens for a Sound Economy, I would like to suggest that the subcommittee consider the negative effects of banning this Egg King machine on consumers and economic progress in general. These effects should be carefully thought out before taking any steps toward further regulation of the egg industry. It seems clear that consumers are beneficiaries of egg-breaking technology which allows restaurants and bakeries to use fresh, high-grade eggs in their products at lower cost than the alternative processed egg products. Any development which allows higher quality products at lower cost benefits consumers because it gives them a better deal for the money.

It is my understanding that this machine enables bakers to buy and use 45 pounds of fresh eggs for around $15.75. That is compared to $26.32 for the alternative egg products. Overall, the Egg King results in a cost savings of around 50 percent over the alternative products, and the fresh eggs are of higher quality than frozen or powdered eggs. They have much higher nutritional value and they also have more of the desirable cooking qualities than alternative products. These cost savings and quality advantages are probably the strongest arguments in favor of the Egg King. A related advantage is that with the Egg King, the eggs are allowed to remain in their natural containers—their shells—until just before use.

As for the threat of salmonella, it is difficult to believe that a machine which is a serious public health hazard could have been widely used for several years without one documented instance of salmonellosis linked to a properly operated machine. It is my understanding that there has been no such case connected with the Egg King in over 4 years, and that the risk of salmonella is eliminated once the egg product is cooked.

Citizens for a Sound Economy is certainly concerned with true health hazards, but in this case the health hazard seems to have been used as a smokescreen by the egg industry to mask the real problem with the Egg King—that it has become a major competitor for their egg products. In fact, there was a recent case of salmonella in Prince Georges County which was linked not to the Egg King or a similar machine but to contamination of hand-broken eggs. The Egg King actually minimizes human contact, as was demonstrated earlier, because it cracks and separates the egg from the shell with no human handling.

The real problem with the Egg King is probably more economic than health-related. That is, the health issue is being used as a basis for banning a competitor of the egg products industry. Let's look at the economic consequences of an invention like the Egg King. When the Egg King is used by a former customer of the egg breakers, the demand for their product is reduced. Naturally they are interested in keeping the demand for their product as strong as possible, and what better way of maintaining demand for your product is there than outlawing your competition? It's clear that whatever else the Egg King is, it's a very unwelcome competitor of the existing egg products industry. Their economic interest in eliminating the machine is obvious. This is not to say that economic interest is their only motive here, but economic consequences should not be overlooked.

Our main objection to banning the Egg King is that actions like this stifle innovation and entrepreneurship. If this machine is outlawed, others which may save even more time and more money may never be invented. Forcing an inventor, who has already gone to considerable expense to develop and market his product, to also bear the cost of contending with legislative competition from those who are hurt by his innovation, will greatly increase the cost of invention. When inventing is more costly, we all know that less will be invented. This would certainly be an undesirable consequence for consumers and the economy in general.

It is often said that "If you build a better mousetrap, the world will beat a path to your door," but think about what happens to the makers of the old, obsolete mousetraps. Ideally they would begin to work on better mousetraps of their own, but these days there is another way to compete with innovations. In modern times a better saying might be that "If you build a better mousetrap, the old mousetrap makers will do their best to have your mousetrap banned." Rather than watching the world beat a path to your door, you end up watching your invention being attacked by those who have a stake in the old mousetrap. I think that's just what we are watching today.

As a concluding comment, I would like to say that as far as I can tell, no one here is arguing that there is no risk of salmonella in using the Egg King. There is a risk involved in any kind of egg handling or preparation. The question is, should a machine be banned before the tests of its safety under operating conditions consistent with the manufacturer's instructions are conducted? If every new innovation was banned because of an unstudied health risk of the same level as this, the result might be the banning of many technological innovations with great potential to benefit consumers as well as farmers. Thank you.

[The prepared statement of Mr. Gable follows:]

C/S/E

Testimony on egg breaking technology
by Wayne E. Gable, Citizens for a Sound Economy
Presented to the Livestock, Dairy and Poultry Subcommittee
House Agriculture Committee
November 19, 1985

Chairman Coehlo, members of the subcommittee:

On behalf of the 200,000 members of Citizens for a Sound Economy, I would like to suggest that the Subcommittee consider the negative effects of banning the Egg King machine on consumers and on economic progress in general. It seems clear that consumers are beneficiaries of egg breaking technology which allows restaurants and bakeries to use fresh, high-grade eggs in their products at a lower cost than the alternative processed egg product. Any development which allows higher quality products at a lower cost benefits consumers.

It is my understanding that the machine enables bakers to buy and use 45 pounds of fresh eggs for around $15.75, compared to $26.32 for the alternative frozen egg product. These cost savings are probably the strongest argument in favor of the Egg King. Not only is a higher quality product produced at a lower cost, but the eggs are allowed to remain in their natural containers--shells--until just before use.

As for the threat of salmonella, it is difficult to make a case that a machine which is a serious public health hazard could have been widely used for several years without one reported incidence of salmonella. It is my understanding that there has been no such case connected with the Egg King in four years and that the risk of salmonella is eliminated once the egg product is used in any marketable recipe.

Citizens for a Sound Economy is concerned with true health hazards, but in this case the health hazard seems to have been used as a smoke screen by the egg breaking industry to mask the real problem with the Egg King--that it has become a major competitor for their egg products.

When a machine like the Egg King is used by a former customer of the egg breakers, the demand for their product is reduced. Naturally, they are interested in maintaining demand for their product and even increasing it if possible. It is clear that, whatever else the Egg King is, it is a major threat to the existing egg products industry. Their economic interest in eliminating the machine is obvious. This is not to say that economic interest is their only motive here, but economic benefits are no doubt a major factor.

One of our main objections to banning of the Egg King is that actions like this stifle innovation and entrepreneurship. If this machine is outlawed, others which may save even more time and money may never be invented. Forcing an inventor to contend with those whose labor becomes less valuable because of the invention will reduce the incentive to invent. This would certainly be an undesirable consequence for consumers.

It is sometimes said that "if you build a better mousetrap, the world will beat a path to your door." But what happens to the makers of the old mousetraps? In modern times, a better saying might be that "if you build a better mousetrap, the old mousetrap makers will do their best to have your mousetrap banned." Rather than watching the world beat a path to your door, you end up watching your invention be attacked by those who have a STAKE in the status quo.

On behalf of the 200,000 members of Citizens for a Sound Economy, I therefore urge you to consider the likely negative effects--on consumers and on economic progress--of a ban on the Egg King machine. Entrepreneurship should be encouraged, not discouraged, by government policy.

Thank you for this opportunity to address the subcommittee.

Mr. Volkmer. Thank you very much, Mr. Gable.

With that, the subcommittee will stand in recess until 12:50.

[Recess taken.]

Mr. Volkmer. The subcommittee will resume its hearing.

If the previous witnesses will please come to the table, that panel, we will now hear from Mr. Luberski. Your statement, like all other statements, is made a part of the record. At this time you may proceed with your testimony. You may either give a summary of it or in total, however you feel.

Mr. Luberski. Are you ready for me?

Mr. Volkmer. Yes; go ahead.

Mr. Murphy. Mr. Chairman?

Mr. Volkmer. Yes?

Mr. Murphy. Before he starts his statement, Mr. Maynard and I had asked that our written statements be put into the record.

Mr. Volkmer. They are all a part of the record. They are.

Mr. Murphy. Fine. Thank you, sir.

Mr. Volkmer. Yes.

STATEMENT OF TIM LUBERSKI, OWNER, HIDDEN VILLA RANCH, PLACENTIA, CA

Mr. Luberski. My name is Tim Luberski, and I am pleased to appear before the subcommittee this morning to present my testimony. I wish to submit my statement for the record.

Our company, Hidden Villa Ranch, is probably the largest food service egg distributor in the western United States. The Egg King mainly applies to our customer base as a replacement for hand breaking in hotels and restaurants, since that is the main part of our business.

I would like to comment about bad eggs. We sell about 3.5 million eggs a week into the food service industry. Over the past years I can hardly remember ever even seeing or receiving a bad egg. In fact, eggs that are under our quality requirements are sent to breaking plants to be made into frozen whole egg, and it is also to my knowledge that at these breaking plants they do commingle egg and shell before the pasteurization process.

Most hotels and restaurants who do not use the Egg Master hand break the eggs into 5-gallon tubs. If you have the opportunity ever of being in a restaurant or a hotel, you can find a lot of shell at the bottom of these tubs, so at your breakfast this morning at a hotel or a restaurant, you probably had commingling in your eggs before you ate them.

We as a company are not against frozen eggs. In fact, we are a big customer of frozen eggs. In the past 2 months we have sold over a quarter of a million pounds of pasteurized frozen eggs. However, I feel the machine has a place, a more efficient, more sanitary way of making your scrambled eggs when you dine out. Thank you.

[The prepared statement of Mr. Luberski follows:]

HVR
Hidden Villa Ranch

November 18, 1985

The Honorable Tony Coelho
United States Congress
Committee on Agriculture
Chairman of the Subcommittee
Livestock, Dairy and Poultry
Room 130 Long Worth House
Washington D.C. 20515

I was born on an egg ranch in the Los Angeles area in 1952. Our family began egg ranching in 1942.

In 1976 I left the production part of the business and shortly thereafter began a full-time egg distribution business.

This business is now possibly the largest food service egg distribution company in the Western United States.

Many of our customers have used the Egg King Machine for several years. We have had no instance of problem with their eggs. In fact, we have given the machine away to several large companies in order to encourage them to purchase our eggs.

I understand that there are questions regarding the Egg King. The questions I would like to address from experience are as follows:

I. Concerning Mingling of Shell and Liquid

Most of our customers who use the machine are hotels and restaurants that were previously hand breaking eggs. Normally in most food service establishments eggs are broken by hand (even the night before) into an empty 5 gallon tub. Nearly every tub has visible egg shells on the bottom. Some shells are as large as a fifty cent piece. Also in manufacturing frozen eggs at a U.S.D.A. plant, shells are strained within the machinery. These shells are actually washed by the liquid eggs.

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San Diego 619/576-1265 • Phoenix 602/969-EGGS • Los Angeles 213/747-1487 • Orange County 714/526-3220

HVR
Hidden Villa Ranch

II. Bad Egg Entering the Machine

If you hand crack a bad egg into a 5 gallon tub or through the machine you still have a bad egg in the tub. It appears that if you totally want to avoid co-mingling or bad eggs you would have to outlaw fresh egg completely in institutional use.

In closing, I feel that the E.P.I.A. (Egg Product Inspection Act) is presently sufficient in regulating eggs used in the MISA Machine. We sell close to 20,000, 15 dozen cases, of institution type fresh eggs per week. (3.6 million per week.) With the help of E.P.I.A. we virtually never see a bad egg in the millions we sell to the institutional trade.

Tim Luberski
Owner-Hidden Villa Ranch

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Mr. VOLKMER. Thank you very much.

Does the gentleman from Iowa have questions?

Mr. BEDELL. Yes, I do, Mr. Chairman.

First of all, I should clearly point out to you folks, I was involved in the debate on the floor of the House, and I felt it was very wrong for us to be putting you out of business without knowing what we are doing. I want you to understand, however, I want to do whatever is right on this issue, and I am not necessarily here to try to support you folks.

I do have a few questions. One is that in the inspection of the eggs through the commercial plants, as I understand it, it is required that all eggs be broken and inspected individually, and it would appear that that would also be the case where eggs are individually broken in a restaurant, and that your process bypasses that one procedure. I guess I need to know, first of all, how great a concern that should be, because I guess both you and Mr. Luberski indicated that you have hardly ever seen a rotten egg or anything. It hardly seems reasonable that we should require all commercial operators to break and inspect at least grade A and B eggs if that's something that doesn't need to be done. If it is something that needs to be done, then it hardly seems—in my mind—reasonable to say that we are going to let you furnish a machine that bypasses that requirement.

Can any of you give me any answer to that? Maybe you are not the right people to ask that. I think maybe I need to talk to some of the others as well, but what is your answer to that question?

Mr. MURPHY. Mr. Bedell, if I may, sir, we do have apparently some scientific people of very high stature that will be testifying later today. They may want to address that issue but I would like to simply say this: Because of the quality of eggs that are used in an egg-breaking plant, the requirement for inspection is necessarily different than it would be in a bakery or other food service establishment.

Mr. BEDELL. Well, the reason I would disagree with that is, I would think that they must have their eggs already graded, too, do they not?

Mr. MURPHY. They do not.

Mr. BEDELL. Oh, they do not?

Mr. MURPHY. They do not.

Mr. BEDELL. They don't have grade A and grade B eggs and then the lower grade eggs?

Mr. MURPHY. Well, it's my understanding that in an egg-breaking plant, that they may well break A's and B's, but they may well also break rejected eggs.

Mr. BEDELL. Oh, I understand that, but if I was operating an egg-breaking facility, and if I could take my grade A and B eggs and just throw them in a machine and not have to go through the rest of that procedure, I should think I would do that and then inspect the grade C eggs, but apparently they are not permitted to do that. I assume either it's wrong not to require them to do that or there must be some other reason.

Mr. MURPHY. Well, I think it's probably because of the mix of eggs that they use, but second, I don't believe that the capacity of this machine is anywhere near what an egg-breaking plant could use. They have got millions of dollars invested in their equipment, and of course to take a machine that is relatively inexpensive and has a very small capacity, I just don't think it would suit their purpose.

But the point is that the quality of eggs that are used, there is inspection, organoleptic inspection of the egg when the machine is used. It may not be of the interior of the egg, but that is because you have grade A and B eggs, and if you look at the standards for those eggs, there is less than one egg under those standards that could be a bad egg, so to speak, and that would be with a blood or a meat spot. If it's anything worse than that, they are not even permitted in grade A or B, so you've only got one egg out of one case that can have blood or meat in it, and the American Egg Board—which is a creation of this Congress—say that the blood spots show that it's a healthy, fresh egg and that it is edible.

Mr. BEDELL. Mr. Chairman, is the USDA still here?

Mr. VOLKMER. Yes; and we will bring them back. I plan to bring them back because I have a question as a result of what has been said here. We will bring Mr. Kennett back.

Mr. BEDELL. Well, maybe I could at that time address them.

Mr. VOLKMER. We'll bring Mr. Kennett back.

Mr. BEDELL. It appears to me that either we are requiring something that shouldn't be required of the commercial operations or that we are letting the people that use this machine do something that they should not be permitted to do, one or the other, but I don't think that's the major issue. I think we need to understand it but, as far as I am concerned, the major issue is that somebody ought to have responsibility, who has greater scientific knowledge than we have, to make the decision as to what should be done in this case.

Mr. MURPHY. If I might make a parallel, Mr. Bedell, you have—that is, our Government has—different standards that are applicable to the local butcher than to a processor of meat, and the reasons are the same. The egg producer produces egg to be sold in commerce. He is selling a liquid egg product. The requirements—he is using a lower quality of egg. You must then consider that in light of the fact that the users of this machine are breaking eggs that have already been inspected, that have been candled, that are inspected by the user of the machine before they are placed in the machine.

Mr. BEDELL. Well, I don't want to argue with you, but I just have to tell you I don't buy the argument that since it's a local operation and one is a national operation, that we ought to have completely different standards for the two. I personally don't agree with that.

Yes, Mr. Luberski?

May I hear from Mr. Luberski, Mr. Chairman?

Mr. VOLKMER. Yes; the gentleman is given 2 additional minutes.

Mr. LUBERSKI. Thank you. I think I have a simple answer to that.

I am allowed, as an egg seller, an egg distributor, to sell grade B or better eggs to bakeries, hotels, and restaurants, eggs that have been washed and graded under county and State regulations. In every State in the Union they have those regulations.

A breaking plant as a rule buys unwashed, ungraded eggs as they come off the production plant. It doesn't make sense to wash and grade eggs, spend the 5 cents a dozen, and turn around and send them to the breaking plant where they do not need to be washed and graded. That's why an egg-breaking plant can have a variety of grades and sizes, et cetera, in there.

Mr. **Bedell**. Thank you.

Mr. **Volkmer**. The gentleman from Georgia.

Mr. **Thomas**. Mr. Chairman, I am not a member of the subcommittee, of course, but I have——

Mr. **Volkmer**. As a member of the full committee, you are recognized for questions.

Mr. **Thomas**. Thank you. I would just like to ask one or two questions.

Mr. Maynard, I think you made the statement a while ago that you had 800 of these machines in operation for 5 years. Is that an accurate statement?

Mr. **Maynard**. That's correct. No, not all 800.

Mr. **Thomas**. Well, I think that's what you need to clear up because your statement, if you would go back and look at it, says, "I have 800 of these machines out and they have been in operation for 5 years." I would like for you to make that statement clear and accurate, if you would, for this subcommittee.

Mr. **Maynard**. The machines have been on the market —I think that's what I stated—for a period for over 5 years, and I have a total of 800 machines out there today.

Mr. **Thomas**. Today, but not 800 machines operating over 5 years.

Mr. **Maynard**. No, not 800 over 5 years. I didn't sell 800 the first day.

Mr. **Thomas**. When we had the first hearing—or during the floor discussion—at that time the figure was used of 700 machines. Have you sold an additional 100 since that time, say a month ago?

Mr. **Maynard**. I think that the testimony was "in excess of 700." OK?

Mr. **Thomas**. Up until, let's say, 2 years ago, how many would you have had in operation at that time?

Mr. **Maynard**. Approximately 400 machines.

Mr. **Thomas**. 400? OK. I just thought that needed to be cleared up because your statement was made, and sounded, and left the impression that there were 800 machines that had been operating for 5 years. That of course is inaccurate, and I wanted the subcommittee to clear it up.

Mr. **Maynard**. I didn't mean to mislead the subcommittee.

Mr. **Thomas**. Mr. Chairman, I would like to ask some questions of the USDA people when you call them up. That completes my questioning.

Mr. **Volkmer**. I will call them back in a minute.

I would just like to ask a couple of questions. I understand, Mr. Murphy, from your testimony, and I would like to know if Mr. Maynard would also agree, that you have no objections to the machine going through a series of tests either by FDA or USDA to determine whether or not it has health implications. Is that correct? In other words, if we had legislation through the Congress requesting that that be tested, you would have no objection to that. Is that the way I understand your testimony?

Mr. Murphy. Yes, Mr. Chairman, with one qualification: We would not want the machine tested by AMS. It is patently obvious that they are prejudiced against the machine, but AMS is not the USDA. The USDA has a department that has equipment testing facilities, called FSIS. FDA has more than adequate facilities to test, or it could be tested under the supervision of one of those two agencies by the National Sanitation Foundation. As I had indicated, Mr. Maynard at his expense has applied to NSF to establish criteria for testing machines, centrifuge breaking machines, for egg-breaking purposes. That is a long process. It is a very expensive process, but it was undertaken long before this matter came before Congress, and we are continuing to pursue that matter.

Mr. Volkmer. All right. The other question I have, Mr. Maynard and Mr. Murphy, and it pertains to the business of Mr. Lubinski, the business that he is in, that is that as I understand it there have been instances where restaurants or others who are utilizing your machine have used less than grade B eggs in the machine. I am not blaming you for that but my question is, how do we try to curtail that so that that doesn't occur? In the event that we are satisfied that the machine with proper use of grade B or above eggs would be satisfactory, how do we make sure that they only use grade B?

Mr. Murphy. If I may, Mr. Chairman, the Egg Products Inspection Act as it exists today, without any modification or any amendment——

Mr. Volkmer. I know it says grade B or above. I know.

Mr. Murphy [continuing]. Requires that if a food service establishment does not use grade A or B eggs, they are subjected to continuous inspection. They can be required to be held to the same standards as an official plant. In addition to that, anyone who violates the Egg Products Inspection Act is subjected to having his product seized and he is subjected to criminal penalties.

Now if that law needs to be beefed up, we would certainly be in favor of that. We don't want substandard eggs used in our machine. We do not want anybody to become ill as a result of misuse of the machine, whether it be substandard eggs or failure to properly clean the machine or properly follow the manufacturer's instructions.

Mr. Volkmer. Maybe, as we develop this, as we go along, we may also have some type of a provision through regulation for cleaning the machine. If you fail to do that within a certain time, then maybe the establishment could be fined or something also, because that is a possibility, too.

Mr. Murphy. We would welcome the opportunity to work with the proper agencies to assure that the machine is used properly. Mr. Maynard doesn't want a lawsuit from somebody that has become ill because of misuse of the machine by someone else, nor do we want anybody to get ill. We encourage that the machine and we insist that the machine be used in accordance with the manufacturer's instructions, and if somebody doesn't do it, then they should suffer whatever penalties are appropriate under the circumstances.

Mr. Volkmer. All right. The gentleman from Georgia.

Mr. Thomas. Mr. Chairman.

Mr. Volkmer. I will yield.

Mr. **Thomas**. Thank you, sir. I appreciate the chairman yielding.

I would just like to ask one or two questions that have been on my mind during the course of the hearing this morning, while you all are here. As I have stated, really the questions I have specifically I would rather hold for USDA.

Under what patent, what year was this machine patented, your particular machine?

Mr. **Maynard**. There is a pending patent on the machine.

Mr. **Thomas**. But I guess the process itself has been under a patent for some time. The process was patented in the fifties. Is that correct?

Mr. **Maynard**. In the fifties?

Mr. **Thomas**. What I am trying to get at is——

Mr. **Volkmer**. If the gentleman would yield, I understand in the 1890's we had a patent issued on a centrifugal machine for cracking and breaking eggs.

Mr. **Thomas**. It was just a point that I wanted to try to get cleared up, and you might want to reflect on it. There has been an inference on many occasions, even in the floor debate, that this was some new technology that we were dealing with here. In essence it is a process that of course has been patented many years ago, and of course a process that was—during the Egg Products Inspection Act—was ruled to be unacceptable by USDA standards. I just think that's a point that needs clearing up, that this is not some new innovation. It is not some new process. It is a process that has been around for many, many years, and that's why I was asking you as to what the date of your patent was.

Is that a statement you would agree with, or do you take issue with what I have just said?

Mr. **Maynard**. Well, I take issue with what you said. I am not questioning the fact that a centrifuge has been around for a long, long time.

Mr. **Thomas**. A long time.

Mr. **Maynard**. The application for food processor in restaurants and bakeries, the application of the centrifuge is new. That part of the technology is new.

Mr. **Thomas**. You mean just where you are using it is new, but not the process or anything else, so this is not——

Mr. **Maynard**. The application of the centrifugal process——

Mr. **Thomas**. But my point was, it is not new technology, is it?

Mr. **Maynard**. The application of it, yes, is new.

Mr. **Volkmer**. I will reclaim my time. I would just like to say, Mr. Maynard, I don't think it has a lot to do with it but perhaps your attorney can obtain for you information in regard to a patent obtained by Martin J. Powers of Chicago, IL on May 30, 1893, that provides for a centrifuge. I am reading to you from the patent itself: "The process of extracting the contents of eggs from their shells, which consists in subjecting any desired number of eggs to be treated to the action of centrifugal force, substantially as described." That was in 1893.

Mr. **Maynard**. I am very familiar with that, sir.

Mr. **Volkmer**. All right. Now whether it was utilized or not is another thing. As you said, it wasn't utilized.

Mr. **Maynard**. That's correct.

Mr. MURPHY. It is an entirely different type of machine, too, in terms of the cleanability and what have you.

Mr. THOMAS. Would the chairman yield for just one final question?

Mr. VOLKMER. Yes.

Mr. THOMAS. There was one other statement I just thought that to me—and I want to assure the gentlemen of this panel of one thing, and I am going to be very candid with you. I actually don't have any egg crackers in my own district, in my own area. We would be selling more eggs if this machine was adapted, if you want to know the truth, as far as my own personal interest. The reason I am glad to see this hearing is that I think that there are a myriad of facts that could not—time was not adequate—that could not be brought out on the floor when this hearing occurred. I think they need to be brought out here today, and I have all confidence that is occurring.

So I want to assure you that it has never been my intent any of the time to put anybody out of business. Now if that is a byproduct of pursuing what I think is best in the public interest, then I am sorry it has to happen, but literally I am just trying to get at the facts here today, and I think one by one we are beginning to illuminate a number of them.

But the allusion was made a while ago to the fact that people are killed by speeding automobiles, cars that aren't handled properly. We have laws that are being broken when that is done. Is it not true, in the case of these requirements which you refer to, these instructions—and this is one of the very important points, I think, in the whole issue—that certainly if everybody was to adhere to all of the specific things that you have outlined, it would enhance the safety of the machine, but these are merely manufacturer's requirements. In no way are they laws; in no way are they regulations.

I wanted to get that straight because you seem to infer that—in using that comparison or that allusion to a speeding automobile—that we can't stop people from breaking laws. Gentlemen, there are no laws governing this machine at this time. These are merely requirements. That is one of the responsibilities of this committee, and I think it is very real that if the committee itself has already been an instrumental part in establishing the laws—and there are enforceable laws, let me assure you, that are applied in egg processing plants—then I feel the committee has the responsibility to consider whether or not it is going to shoulder its responsibility and come up with enforceable requirements here, and just who does have jurisdiction.

I just thought that was a point that needed making, that we are really talking about here manufacturer's recommendations and not any kind of laws or regulations that this machine is operating under at this time.

Mr. MURPHY. Mr. Thomas, if I may comment on that, sir, two things: One, you are held in the greatest of esteem and certainly respected for undertaking to represent your constituents, and all we would ever ask of you, sir, is that you approach the facts and look at them and make your individual determination. We certainly respect your right——

Mr. Thomas. I give you my assurance I will do my best, and I think that you have approached it—I will give my confidence to the panel—I think you have done the same thing. I think you have approached it very straightforward, and I appreciate your honesty and candor, too.

Mr. Murphy. With respect to the laws, however, I think that there are an abundance of State and local laws, as well as the mandates to the FDA under both the Food and Drug Act and under the Egg Inspection Act, that do provide for supervision of food service establishments and require that they produce a wholesome product. Now I can't quote you every law from every State, but I can assure you, and I think that when some of our bakery people come up, they can address that issue and tell you that they are subjected to very stringent laws to assure that they have a wholesome product.

Whether they use this egg machine or whether they use a meat cutter or whether they use a can opener or a dishwasher or a Hobart mixer, they must do so in a safe and sanitary manner. They are controlled by State and local health agencies, and I think the laws are more than adequate in that area, but certainly the FDA has overall supervision in these same areas and have put out a model sanitation code. If I am not mistaken, I believe the law requires that each must have laws equal to or better than the model sanitation code. If not, it certainly wouldn't be a bad idea.

Mr. Thomas. Thank you, Mr. Chairman.

Mr. Volkmer. Fine. If there are no further questions for this panel, we will go to the next panel, then.

Before I go to the next panel, I would like to have Mr. Handley and Mr. Kennett come forward because we do have a couple of questions as a result of this panel. I would like for them to come back.

OK, Mr. Handley and Mr. Kennett. In the statement of Mr. Maynard there is a reference to a test that was made by the Food Safety and Inspection Service on a machine in St. Louis, MO, at one of their customers. Can you comment on that?

Mr. Handley. Connor, are you aware of that?

I will ask Mr. Kennett to comment on that, Mr. Chairman.

Mr. Kennett. The committee alluded to the fact that in USDA we may not do everything perfect, and this may be another example of that. We approve—"we" being the Agricultural Marketing Service—we approve equipment for egg-breaking plants. The Food Safety and Inspection Service approves equipment in the use of meat and poultry inspection plants. As I understand this, this machine was presented to them for approval as an egg breaker in meat and poultry inspection plants. In other words, there are some eggs that are broken in the manufacture of foods containing meat and poultry, so it's under meat and poultry inspection, and it's sort of like a restaurant except it's covered by meat and poultry inspection because they use meat and poultry.

Usually when that occurs they come to us, who would have knowledge of that, to see if it is acceptable, and for some reason we miscommunicated. That's why I say it's just an honest mistake. We told them we don't accept it; they thought we said we did accept it. I don't know how that happens, but that's the way it happens.

They approved it temporarily, or they approved it based on what we told them, they thought we told them. Then we found out—and I don't know exactly how—that they did do that. We brought it to their attention and they corrected it, so it is not approved as an egg breaker in a meat and poultry plant. It is not approved now, so it was just a mistake. It is approved for other purposes in a meat and poultry plant, as it would be in an egg products plant, but not for breaking eggs.

Mr. Bedell. Would the gentleman yield?

Mr. Volkmer. Before I do, I understand there is an internal document between the Agricultural Marketing Service and FSIS in regard to this, is there not?

Mr. Kennett. We did write a memorandum as to why we took the position we did and why we don't approve it, and it's similar to what Mr. Handley testified to. We just put it on the record to them for that.

Mr. Volkmer. I would appreciate—I am going to ask you to furnish us a copy of that memorandum and the correspondence you had in regard to this for the record.

Mr. Kennett. We would be glad to.

Mr. Volkmer. I would like to have it within the next week, so we can get it in the record.

Mr. Kennett. We would be glad to do so.

[The information follows:]

United States Department of Agriculture
Food Safety and Inspection Service
Washington, D.C 20250

October 18, 1983

Misa Manufacturing, Inc.
7766 Westminster Avenue
Westminster, CA 92683

Gentlemen:

A review of the drawings and reports from our inspectors indicates that the following equipment is constructed of acceptable materials, performs satisfactorily, and can be maintained in good sanitary condition:

Egg Breaking Machine, Model 81081-982

Therefore, the above equipment is acceptable for use in federally inspected meat and poultry plants. Any changes in design, construction, and materials in future models should be reviewed and evaluated by this office. Once this equipment is published in our "Accepted Meat and Poultry Equipment" booklet, this letter becomes invalid and can no longer be used as an authorization for installation of equipment in plants.

This acceptance does not imply compliance with Department of Labor Occupational Safety and Health Standards, nor should it be considered as an approval of processing methods. Any departure from established procedures must be cleared with the Slaughter Inspection Standards and Procedures Division or the Processed Products Inspection Division.

Sincerely,

L.C. Hussey
Industrial Specialist
Equipment Branch
Meat and Poultry Inspection Technical Services

United States
Department of
Agriculture

Food Safety
and Inspection
Service

Washington, D.C.
20250

March 29, 1984

Mr. H. E. Maynard
Misa Manufacturing Company
7766 Westminster Avenue
Westminster, CA 92683

C
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P
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Dear Mr. Maynard:

It has been brought to our attention by our Inspection Personnel, Food Safety and Inspection Service and the Egg Products Inspection Section, Grading Branch, Agriculture Marketing Service, that your Centrifuge type machine, Model, 81081-982 is not suitable for breaking eggs intended as an ingredient in meat or poultry items. Regulation state that shell eggs must be broken individually and examined for wholesomeness at time of breaking.

Therefore, we will not list your equipment as an egg breaking machine. However, we have no abjection to its being used as a centrifuge and will list it in our "Accepted Meat and Poultry Equipment" booklet as follow-Centrifuge Model, 81081-982.

This letter supersedes our letter of October 18, 1983.

Sincerely,

/s/

Royal J. Oyster
Branch Chief
Equipment Branch
Facilities, Equipment, and Sanitation Division
Meat and Poultry Inspection Technical Services

United States
Department of
Agriculture

Food Safety
and Inspection
Service

Washington, D.C.
20250

D R A F T

Mr. Joseph M. Murphy
Attorney at Law
4000 Macarthur Blvd., Suite 990
Newport Beach, CA 92660

Dear Mr. Murphy:

This is to confirm our recent meeting with you and your client, Mr. Michael Maynard, regarding the use of the Centrifuge, Model 81081-982, manufactured by Misa Manufacturing, Inc., and accepted for use in federally inspected meat or poultry plants.

The Centrifuge, Model 81081-982, may be used in meat and poultry plants provided:

1. The end product produced must be wholesome and unadulterated.
2. The equipment must be operated and maintained in a sanitary manner as determined by the Inspector in Charge at the plant.
3. Due to the potential problems from contamination and mishandling of egg products, the centrifuge may be used to break eggs provided that the use is covered by a partial quality control program approved by FSIS that covers at least:
   - sanitizing of the eggs
   - grade of the eggs
   - end use of the products in which the eggs are an ingredient
   - treatment of the liquid egg products

We hope this will clarify any misunderstanding on the use of the above equipment.

Sincerely,

John W. McCutcheon
Deputy Administrator
Meat and Poultry Inspection
Technical Services

UNITED STATES
DEPARTMENT OF
AGRICULTURE

Agricultural
Marketing
Service

Washington,
D.C.
20250

Poultry Division

TO: H. C. Kennett, Jr.
Director

DATE: June 13, 1985

FROM: Larry W. Robinson
Chief, Grading Branch

SUBJECT: FSIS Proposed Acceptance of MiSa Centrifuge for Egg Breaking

We appreciate the opportunity to review and comment on the proposed letter from John W. McCutcheon, Deputy Administrator, FSIS, to Joseph M. Murphy, an attorney representing MiSa Manufacturing, Inc., manufacturer of the Egg Master centrifuge. Obviously, FSIS is considering reversal of their previous position and may permit use of the centrifuge for processing egg products in federally inspected meat and poultry plants. This is of significant concern to us since such a change would directly conflict with our position on use of the equipment and with the regulations we enforce in federally inspected egg products processing plants.

We feel that USDA as an Agency should maintain a uniform position on this issue. Accordingly, we have shared our general views on the centrifuge with our FSIS counterparts in arriving at our present joint position of not accepting the unit for egg breaking purposes. In the light of FSIS's proposal to accept the centrifuge for such use, we feel it important to elaborate, possibly more formally, on our reasons for denial.

We have two major health and food-wholesomeness concerns relating to egg products processed through the centrifuge. The first relates to the comingling of egg shells and liquid inherent in use of this equipment. In practice, eggs are dumped directly from filler flats into an opening at the top of the unit. A spinning cylinder inside causes the eggs to be broken or crushed, and the liquid is "wrung" from the comingled mass by centrifugal force through holes in the cylinder wall.

Scientific studies have long shown that egg shells serve as a natural harbor for Salmonella. Some of this relates to fecal contamination which occurs during the normal egg-laying process. While the manufacturer of the centrifuge recommends that only washed, sanitized, graded eggs be used for processing in the equipment, this does not address the problem of Salmonella in the pores of the egg shell since these organisms are relatively unaffected by the washing and sanitizing process. This was substantiated by W. A. Moats of the Agricultural Research Service in his exhaustive literature review on egg washing that appeared in the November 1978 Journal of Food Protection (copy attached). In it, he states that it has repeatedly been found (in scientific literature) that washing or rinsing in a sanitizing agent is relatively ineffective in removing Salmonella when the bacteria are deeply embedded in the shells before washing or rinsing. For this reason, we believe acceptable egg-breaking procedures should maximize separation of the shell from the inner liquid egg contents, and the egg products inspection regulations require this as a means of minimizing possible Salmonella contamination of egg products.

Additionally, the firm's recommendation on the eggs to be used presupposes that washed, sanitized, graded eggs are all clean on the outer surface. We know that, as a practical matter, this is not the case and is impossible to achieve even in "state of the art" processing plants. The U.S. Standards for consumer-grade eggs recognize this by including tolerances for checked, dirty, leaker, and loss eggs. It also does not address dust particles that may contaminate the shell during transit from the shell egg processing plant to the point of use. Thus, dirty eggs (fecal contaminated and otherwise) and dirt from the filler flat may be comingled with liquid in the centrifuge even if USDA-graded eggs are used for processing.

This brings us to our second major concern—the potential for inclusion of unwholesome eggs in egg products processed through the centrifuge. As noted previously, even for USDA-graded eggs, tolerances are established for loss or inedible eggs which cannot, as a practical matter, always be detected and removed during normal processing. This was recognized in promulgating the egg products inspection regulations and, as a result, in official egg products plants, eggs must be broken and the inner liquid contents inspected for wholesomeness on an individual basis. This enables segregation of unwholesome or inedible eggs, thus preventing their inclusion in the finished product. With the centrifuge, the eggs are placed in the unit and broken in mass providing no opportunity for this important segregation. Thus, the liquid from unwholesome eggs is included in product processed in the centrifuge. While a proviso of the FSIS-proposed acceptance indicates that the end product must be wholesome and unadulterated, several types of unwholesome eggs can be processed through the centrifuge and mixed with wholesome eggs with no means of detecting their presence in the final product. Inspection of the individual egg contents by sight and smell is the only means available to detect these unwholesome conditions.

Possibly, our concerns can be more readily perceived by comparing our position on this matter to those of FSIS on similar issues faced in meat and poultry inspection. We have followed with interest the issue of Salmonella contamination in raw poultry and meat. In the past few months, FSIS has publicly gone on record noting that the recent outbreak of salmonellosis caused by contaminated milk in the Chicago area, and other similar publicity on microbiological contamination may lead to increased public pressure for action to reduce Salmonella contamination in meat and poultry. In this regard, FSIS officials note that the public may insist that the food industry and the Government take action to reduce the problem through improved technology or stricter standards.

We concur in these views and believe they are fully applicable to use of the centrifuge for egg breaking. In fact, it appears possible FSIS acceptance of the centrifuge for this purpose is contradictory to their thrust for reducing Salmonella contamination in products for which they maintain regulatory authority. We feel strongly that acceptance of the centrifuge for egg breaking can be contributory to Salmonella contamination in the resulting egg product and, consequently, believe it should not be recognized or accepted by USDA for use in official plants. Equipment is available in the form of automatic egg-breaking machines fully capable of breaking eggs at high production speeds while maintaining separation of shell and liquid in a manner that minimizes contact between shell and liquid. We not only believe the use of such equipment is necessary in minimizing Salmonella contamination, but feel its use is in complete accord with the "improved technology" and "stricter standards" cited by FSIS to reduce the incidence of this food-poisoning organism.

We feel another parallel can be drawn between established FSIS procedures for inspecting meat and poultry products and our concern regarding the inability to detect unwholesome, individual eggs after they have been comingled with other liquid in the centrifuge. As a prerequisite to wholesomeness determination, FSIS requires that individual carcasses with viscera attached be presented to its inspectors. Presentation in this manner is necessary since the viscera, for example, may be the only indicator of an unwholesome or disease condition. Similarly, identification of an abscess must be noted during carcass inspection since it is impossible to detect the condition once the meat has been made into bologna.

For this very reason, we similarly require that eggs be broken individually and inspected for wholesomeness on that basis. With few exceptions, once unwholesome eggs are mixed with wholesome eggs, the opportunity to detect the condition no longer exists. Breaking machines accepted for use in official egg products plants permit this individual egg inspection. The MiSa centrifuge does not.

Finally, we believe the issue of cooking or otherwise heat treating centrifuge-processed egg products must be addressed since treatment of such products is included as one of the items cited for inclusion in the partial quality control program FSIS would require as a provision for accepting the centrifuge for egg breaking purposes.

Salmonella organisms can be killed with proper heat treatment. Thus, the threat of this type contamination lies in failure to comply with established measures required to destroy the organism, or from cross contamination or improper handling of food. Unfortunately, all occur from time to time and provide reason to establish measures minimizing or preventing contamination wherever possible. Cooking or heat treatment may also render unwholesome egg products or, for that matter, unwholesome meat, poultry, or similar products "safe" for human consumption. We believe this is not the issue. While bloody or sour eggs and cancerous meat can be rendered incapable of causing human illness through heat treatment or other means, we believe the general public desires neither for esthetic reasons. Additionally, we believe they expect regulatory officials responsible in these areas to establish requirements which preclude this from happening. Egg liquid produced from the centrifuge may be rendered safe through cooking or heat treatment, but the potential for inclusion of unwholesome and inedible eggs to be consumed by an unknowing public negates its acceptance for egg products processing when acceptable equipment fully capable of providing for adequate inspection is readily available.

While this memorandum is rather lengthy, it is commensurate with our concern on the issue and with our desire to assure that the reasons for these concerns are known. No cases of salmonellosis attributed to egg products have been reported by the Center for Disease Control since the inception of mandatory egg products inspection in 1971. We believe this speaks well for the egg products inspection requirements that have been established and feel that acceptance of the centrifuge as proposed by FSIS is contrary to the best interests of the industry, USDA, and the consuming public.

Attachment

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Egg Washing - A Review

See pg. 923

W. A. MOATS

Animal Products Marketing Laboratory
Agricultural Marketing Research Institute, SEA, USDA
Beltsville, Maryland 20705

(Received for publication May 15, 1978)

ABSTRACT

Cleaning eggs by washing was in the past widely condemned but is now a common practice and required in plants operating under Federal Grading Service. Washing commonly resulted in increased spoilage losses during long term storage. Washing practices that promoted spoilage included using (*a*) wash water colder than the eggs, (*b*) wash water with high bacterial counts, (*c*) wash water containing appreciable soluble iron, and (*d*) washing machines with surfaces contaminated by bacteria. Occasionally spoilage losses were substantial during long term storage even though apparently satisfactory washing practices were followed. Treatment with sanitizing chemicals did not destroy bacteria embedded in shells. Long term storage life is of little concern with present day marketing practices since few eggs are stored for extended periods. However, iron in washwater may accelerate spoilage. Washing, besides improving appearance of eggs, was effective in removing surface dirt and bacteria which would otherwise have contaminated egg meats when eggs were broken out.

Cleaning eggs by washing was at one time widely condemned. At the present time almost all market eggs are washed before distribution in this country and washing is required in egg processing plants operating under Federal Grading Service (*85*). Washing obviously improves the appearance of eggs and thereby improves consumer acceptability. Dirty eggs have historically been downgraded and appropriately so, since it is well established that bacteria and dirt on shell surfaces are major sources for contamination of egg meats when eggs are broken out (*51,65,78,91,92*). Thorough egg washing is therefore particularly important in commercial egg breaking operations. Even visibly clean eggs may harbor considerable numbers of bacteria on shell surfaces (*7, 51*).

Objections to washing as a means of cleaning eggs have been based on observations that washing greatly increased spoilage. Thus Jenkins and Pennington (*47*) concluded that a large proportion of eggs which went bad during cold storage had had wet shells at some time either from washing or some other cause and stated "Attempts, therefore, to improve the appearance of dirty eggs by washing is a practice which cannot be too strongly condemned." Jenkins et al. (*48*) found large increases in spoilage of experimentally washed eggs wiped with a damp cloth, washed in water, or washed in water and rinsed in dilute sulfuric acid. Grzimek (*39*) reported that both dry-cleaned and uncleaned dirty control eggs kept well and concluded that storage losses resulted from washing. Zurek (*93*) found considerable spoilage in washed, dry-cleaned, and uncleaned dirty eggs but not in clean eggs held as control. Haines (*41*) found that eggs washed under sanitary conditions did not show an increase in spoilage but were more susceptible to penetration by bacteria when placed in a bacterial suspension after washing. Fromm (*25*) found that washing increased the permeability of egg shells.

A report by the Egg Producers Council and the Council for Scientific Research of New South Wales (*17*) concluded that bacterial rotting of eggs was almost entirely due to washing. They also observed that machine-washing resulted in heavier losses than washing by hand. Sayers (*74*) and Gillespie et al. (*34*) also found that machine-washing resulted in heavy losses from rots and emphasized the need for efficient decontamination of machine surfaces which contact the eggs. Australian regulations at that time (1950) banned export of washed eggs because of excessive spoilage losses (*34*). Cotterill and Hartman (*14*) also found a higher incidence of rots in machine-washed than in hand-washed eggs.

Gillespie et al. (*32*) found mean losses from rots in unwashed eggs of 1.06% with a variation of 0 - 15.8% for different lots of eggs. Little difference between clean and dirty eggs was noted. Losses of eggs washed by hand ranged from 0.0 - 28.4% with a mean of 2.71%. Reasons for heavy losses in a few lots washed by identical procedures were not evident but may have been related to the types of bacteria in the washing fluid. Kahlenberg et al. (*49*) found that spoilage losses after 6 months of commercial storage ranged from 1.35% (unwashed clean) and 3.65% (unwashed dirty) to as high as 49% for machine-washed eggs in one commercial plant using cold tap water. Davidson et al. (*15*) observed a higher incidence of sours in farm-washed than in unwashed eggs after 6-7 months of commercial storage. Sours showed up in only one lot of seven tested after 3 months of commercial storage. Sours were not readily detected by candling.

Lorenz and Starr *(53)* and Starr et al. *(80)* found that washing usually increased spoilage of both clean and dirty eggs. Lorenz et al. *(54)* observed large differences in the keeping quality of ranch-washed eggs where some ranches consistently had no spoilage in washed eggs and others had up to 33% rots.

Trussell et al. *(83)* also found large differences in spoilage among eggs from 94 farms examined. Rates of spoilage were higher for washed (0 - 25.8% with a mean of 4.6%) than for dry-cleaned (0 - 4.6% with a mean of 1.34%) eggs. Spoilage was higher for mechanically-washed than for hand-washed eggs. It again was not clear why some farms had a lower incidence of spoilage than others using the same type of cleaning. In a further study of mechanical washing by Trussell et al. *(84)*, washed eggs from 15 farms showed average spoilage of 7.44%, with a range of 0.0-19.8%. After special instructions as to cleanup of machines and use of washwater at 130-135 F, spoilage averaged 6.06%, with a range of 0.0 to 22.6%, not significantly different from before. The operation reporting no spoilage used "bleach", presumably sodium hypochlorite, as the cleaning agent.

Pino *(66)* washed lots of 100 clean and soiled eggs by the "Rutgers method" in anionic detergent sanitizer, Nacconal NR, and found no spoilage in washed eggs after 4 weeks at 60 F. Winter et al. *(90)* found the keeping quality of eggs washed in water or detergent was poorer than that of unwashed clean or dirty controls. Keeping quality of eggs washed in detergent-sanitizer [quaternary ammonium (QAC) sanitizers] was better than that of eggs washed in water or plain detergents but no better than that of unwashed dirty eggs.

Miller *(58)* found that the percentage of eggs containing spoilage bacteria was higher in washed dirty eggs than in unwashed, regardless of the washing and sanitizing treatment used. He also found a considerable number of eggs containing cocci. About one-fourth of eggs containing cocci contained *Streptococcus faecalis* at 5,000,000-60,000,000/ml. Remaining cocci were mostly micrococci at levels of less than 1,000,000/ml.

Conner et al. *(13)* found only two cases of molds and one of rot in 7000 eggs stored 9 months at 30 ± 1 F after various washing treatments. The low storage temperature apparently prevented multiplication of bacteria in the eggs. Bigbee et al. *(3)* washed eggs in a detergent sanitizer and oil-in-water emulsions containing sanitizers. They noted no increase in percentage of eggs containing bacteria over that in the controls (9.09%) and also no spoilage after 6 weeks at 35 F.

Brant et al. *(11)* described an experimental cleaner which was reported to clean eggs more effectively with less damage than commercial washers. Spoilage losses after 8 weeks at 50 F were 0.1% for unwashed controls and 0.4% for eggs washed with the experimental cleaner. For commercially washed eggs after 8 weeks at 50 F, average spoilage was 1.8% for unwashed controls, 5.9% for washed dirties and 2.7% for washed clean eggs. The experimental cleaner used an acid cleaning formulation, and wash water was not recirculated.

EFFECT OF WASHWATER TEMPERATURE

Haines and Moran *(24)* appear to have been the first to observe that when eggs are placed in a bacterial suspension cooler than the eggs, a pressure gradient is set up which draws bacteria through the shell into the interior. These findings have been confirmed by numerous other investigators including Pritsker *(67)*, Stuart and McNally *(82)*, Funk *(27)*, Lorenz and Starr *(53)*, Starr et al. *(80)*, Forsythe et al. *(23)*, and Brant and Starr *(10)*.

Brant and Starr *(10)* investigated the effect of temperature, time of exposure and bacterial concentration on infection of eggs dipped in suspensions of *Pseudomonas polycolor*. The rate of infection was higher when the bacterial suspension was cooler than the eggs and fell off rapidly as the temperature of the bacterial suspension was increased above that of the eggs. However, at high bacterial concentrations, appreciable infection occurred even when the bacterial suspension was warmer than the eggs. The time of exposure only slightly affected the incidence of infection.

EFFECT OF SANITIZERS

Sayers *(74)* found that disinfectant dips after machine-cleaning of eggs were ineffective in reducing spoilage. He found, however, that any method of disinfecting the machines themselves reduced spoilage associated with machine cleaning. Data reported by Funk *(27)* in 1948 covering experiments carried out over 10 years are quite variable but frequently show heavy spoilage losses of eggs washed in water at a temperature lower than the eggs. Washing soiled eggs in sanitizing solutions (Roccal, Kleeneg, Klenzade or 1% lye) seemed to give spoilage rates comparative to those of unwashed dirty controls but higher than those of naturally clean eggs.

Penniston and Hedrick *(65)*, working with artificially dirtied eggs, found that counts in the broken-out egg meat were substantially lower in eggs washed with sanitizers (chlorine or Emulsept) than with plain water. Gillespie et al. *(36)* found that sodium hypochlorite at levels up to 5,000 ppm in egg washing machines reduced surface counts on eggs and was, at high levels, effective in reducing spoilage below that when a water wash was used. Spoilage was still higher than in unwashed controls. A QAC sanitizer (Fixanol) was similarly effective but its effectiveness fell off with continued use, suggesting that bacteria may become adapted to it.

Miller et al. *(57)* found that rinsing eggs in sanitizers following washing in water containing black rot organisms was ineffective in preventing spoilage. Adding Roccal to washwater containing black rot largely destroyed bacteria present and prevented occurrence of black-rots in washed eggs.

Miller (*58*) found that rinsing eggs in a Roccal solution or 1% sodium hydroxide did not reduce the incidence of spoilage of washed eggs as compared to a water rinse alone. Forsythe et al. (*23*) found that washing either in a household detergent (Vel) or a quaternary ammonium sanitizer (Roccal) was effective in reducing surface counts (rinse method) to low levels.

Miller (*60*) found that the percentage of eggs containing gram-negative spoilage organisms after long-term storage was higher when eggs were washed in water or a household detergent than when washed in a detergent-sanitizer or an industrial-type detergent containing sodium silicate and alkyl aryl sulfonate.

Bierer et al. (*1*) evaluated the efficiency of a number of commercial egg cleaning formulations in removing *Salmonella typhimurium* from artificially contaminated eggs. Commercial egg-cleaning formulations containing QAC sanitizers were 52 - 92% efficient, which was comparable to commercial bleaches at 200 ppm chlorine. In further studies (*2*) with egg-cleaning formulations and individual chemicals, QAC formulations were judged to be relatively ineffective and zinc sulfate and sodium hydroxide were the most effective.

Rizk et al. (*65*) working with eggs artifically contaminated with *Salmonella* found that a number of QAC and chlorine sanitizers were effective in removing *Salmonella* from the surface (swab method) but that none were effective against *Salmonella* which had penetrated deeply into the shell (blending). In contrast to the results of Bierer et al. (*2*), zinc sulfate did not prove as effective as either QAC or chlorine sanitizers against surface bacteria.

Sauter et al. (*71*) found that keeping quality of nest-run eggs washed in a non-sanitizing detergent (Tide) was improved if they were dipped in an iodine (Heliogen) solution after washing. When a detergent containing QAC sanitizer was used, results were less clear cut. When eggs artificially inoculated with pseudomonads were washed with various sanitizing agents, spoilage was reduced but was still substantial. In a further study (*72*), washing 3 min in dilute (0.65%) sodium hydroxide eliminated spoilage from eggs artificially inoculated with pseudomonads.

Frank and Wright (*24*), Gordon et al. (*38*), Lancaster et al. (*52*) and Williams and Dillard (*89*) also found that salmonellae already embedded in the shells were not destroyed by dips in various sanitizing chemicals.

Dipping eggs in antibiotics after washing was also found to be ineffective in reducing rots (*14, 59, 75*). Elliott and Romoser (*19*) concluded that antibiotics are bound by proteins in the shell, masking their activity.

In contrast to results with sanitizing chemicals, dipping in hot water (60 C or above) for a few minutes [the "thermostabilization" procedure of Funk (*27*)] has proven consistently effective in controlling rots (*20, 37, 50, 70, 72, 75, 76*). Schmidt and Stadelman (*75*) found that this procedure stabilized the albumen during storage. The heat treatment procedure does not seem to have been applied commercially, however.

Mountney and Day (*63*) found that chlorine or QAC sanitizers controlled buildup of microbial contamination in washwater under commercial conditions. They found, however, that microorganisms isolated from the washwater containing the QAC cleaning compounds were predominately gram-negative rods of types known to cause spoilage. Soprey and Maxcy (*79*) demonstrated that *Pseudomonas fluorescens* and *Escherichia coli* can adapt to QAC sanitizers. Gillespie et al. (*36*) also observed that a QAC lost its effectiveness with continued use. Chlorine sanitizers were found to rapidly lose their effectiveness as successive batches of eggs were washed (*65*). QAC sanitizers were less rapidly inactivated (*9, 65*), and were recommended by Rizk et al. (*68*) for this reason.

In summary, eggs washed with some type of sanitizing chemical in the washwater invariably kept better than eggs washed in water. Sanitizing rinses after washing or washing in sanitizers after contamination of eggs with bacteria was undependable in reducing spoilage or contamination by *Salmonella*. Apparently bacteria which have penetrated deeply into the pores of shells are protected from the action of sanitizing chemicals. Reports on the effectiveness of various sanitizers are conflicting.

EFFECT OF WASHING ON NUMBERS OF BACTERIA ON SHELLS

Bacteria numbers on egg shells have been determined by methods involving surface rinses (*23, 34, 69*), shaking the crushed evacuated shell with glass beads (*41*), blending the shell after removing the contents (*7, 11, 55, 90*), both swabbing the surface and blending (*65*), washing the surface in water (*13*), both rinse and blending (*65*), and rubbing the egg in a plastic bag containing buffered saline (*32*). Gunaratne and Spencer (*40*) found substantially higher counts by blending than by surface rinse from eggs artificially contaminated with pseudomonads. Penniston and Hedrick (*65*) found bacteria counts by rinse and blending methods were comparable when they analyzed artificially dirtied eggs washed in water, but after washing in Emulsept or chlorine, counts were 3-6 times higher by blending than the rinse method. Relative numbers found by rinsing or swabbing the surface versus blending the entire shell thus depend on whether bacteria are on the surface or embedded in the shell. Surface bacteria which are removed by rinse procedures are likely to contaminate the egg meat when the egg is broken out. Bacteria embedded in the pores are unlikely to contaminate the product during breaking but may penetrate to the interior and cause spoilage.

Penniston and Hedrick (*65*) found that, although washing eggs with plain water removed visible dirt, from three to six million organisms per egg were still present on the shell surfaces. In a further study using artificially dirtied eggs, they found that bacterial counts in broken out egg meats averaged 1,500,000/egg for eggs washed in water and less than 3000/egg for eggs washed in chlorine or Emulsept. Forsythe et al. *(23)* reduced surface bacterial counts more than 90% (rinse method) by washing in either a detergent (Vel) or a QAC (Roccal).

Gillespie et al. *(34)* found that surface counts (rinse) were usually lower after eggs had been washed in water although large increases in spoilage were noted. Washing in hypochlorite or a QAC (Fixanol) effectively reduced surface counts *(36)*. Reduction in surface counts was not necessarily related to a reduction in rots.

Conner et al. *(13)* found surface counts (rinse with brushing) of dirty eggs were reduced from 3,500,000/shell to 83,000/shell by machine washing and 16,000/shell by washing in cold water. Winter et al. *(90)* found higher bacterial counts (blending) on shells of dirty eggs washed in either cold or warm water than on the shells of unwashed eggs. They also found that shell counts were markedly reduced when eggs were washed in a detergent-sanitizer (AFCO 2626) containing a QAC sanitizer (Hyamine 2839). However, spoilage of eggs washed in a variety of detergent-sanitizers was as high as or higher than that of the unwashed controls.

Kraft et al. *(51)* found that 14% of dirty eggs had bacterial counts of greater than 10 billion/shell before washing while none had counts greater than 10 billion per shell after washing although 50% had counts in the range 100 million - 10 billion. The method of washing and of determining shell counts was not given.

Brant et al. *(11)* and March *(55)* found higher bacterial counts (blending) on the shells of commercially washed eggs after washing that before.

EFFECT OF IRON

Garibaldi *(28)* concluded that conalbumin, an iron-binding protein, was the principle barrier to growth of gram-negative organisms in eggs. Garibaldi and Bayne *(29)* found that ferrous sulfate greatly accelerated *Pseudomonas* spoilage of artificially inoculated eggs. Similar results were found with other gram-negative organisms *(30)* and some types of potential spoilage organisms did not cause rots in the absence of iron. Increased spoilage was also found in farm-washed eggs where appreciable levels of iron were present in the washwaters and rapid development of spoilage occurred in some eggs washed in water containing iron *(31)*. Hartung and Stadelman *(46)* found that the presence of iron facilitated penetration of shell membranes by *Pseudomonas*. Brant and Starr *(10)* found higher rates of spoilage of eggs dipped in bacterial suspensions when ferrous sulfate was present in the suspensions. Brant et al. *(11)* noted that spoilage of washed eggs was accelerated following dipping in dilute ferrous sulfate. Brooks *(12)* and Board et al. *(8)* observed that there was a lag in multiplication of organisms in contact with the shell membrane unless ferrous iron was present in the inoculum. Other workers have reported that in eggs contaminated under commercial conditions and held at 15 - 30 C, infection remains confined to the cell membranes for up to 14 days or longer *(4, 18, 26, 35, 61, 64, 81, 92)*. More detailed discussions of the mechanisms of bacterial penetration and rotting of eggs are given by Board *(5, 6)*.

CLEANING EFFICIENCY, INTERNAL QUALITY, AND BREAKAGE

Most reported studies of egg-washing deal with microbiological aspects. However, effective removal of visible dirt is also important. Botwright *(9)* found that many detergent-sanitizers marketed for egg-cleaning were ineffective and found that best results were obtained when a QAC sanitizer was combined with an alkaline detergent. Druckery *(16)* also obtained best results with alkaline detergent-sanitizers. Winter et al. *(90)* compared hand washing with washing using three types of machines. Hand washing and a brush machine washer cleaned eggs better than bubbler or spray washers. Presoaking and addition of a detergent to washwater also improved cleaning. Brant et al. *(11)* found that many commercial washers were ineffective in cleaning eggs and they and Walters et al. *(87)* described a new experimental machine which was reported to clean eggs more efficiently with less breakage than commercial machines then available.

Brant et al. *(11)* reported losses during commercial washing (cracked and broken) of 1.37 - 7.8%. Shupe et al. *(77)* reported that losses in the washing operations in five egg-grading plants ranged from 0.34 - 2.55% and found that 13% of the total breakage losses occurred in handling from the nest to the egg carton. Morris et al. *(62)* and Miller and Mellor *(56)* found, respectively, 2.13% and 6.7% of shell eggs entering egg-grading plants were damaged during washing. Much of the contents of broken eggs ends up in the washwater, creating a serious waste disposal problem *(43, 45)*. Judging from the amount of egg solids in washwater, breakage losses are usually greater in egg-breaking than in egg-grading operations, perhaps reflecting the lower quality of eggs used for breaking.

Aside from bacteriological considerations, washing generally has been found to have little effect on the interior quality of eggs *(15, 87, 90)*, although Forsythe et al. *(22)* found that slight off-flavors could sometimes be detected by a trained taste panel for a few days after washing. Kahlenberg et al. *(49)* found that loss of interior quality of washed eggs varied with the type of machine.

DISCUSSION

Most egg washers now use highly alkaline cleaning compounds based on sodium metasilicate, sodium carbonate, and or trisodium phosphate, together with small amounts of other additives. Some also contain active chlorine or QAC sanitizers. The washwater is recirculated and becomes contaminated with egg solids, dirt and bacteria from the eggs *(45)*. Some fresh water is added so that the cleaning compound is continually diluted unless more is added at intervals. Most machines use a sanitizing rinse following washing. The sanitizer flows back into the washer. In many of the reported studies, egg washing was done by hand or in older type machines. In some instances, household detergents (Tide, Vel) were used and they are quite different from the alkaline cleaners now used commercially. Laboratory studies have generally not attempted to duplicate the buildup of organic material which occurs in commercial washers.

Much of the work reported on egg-washing has been in relation to keeping quality during long term storage. Factors which favor increases in rots have been clearly identified as: (*a*) washing in water colder than the eggs, (*b*) washing in water with high bacterial counts, (*c*) washing in water containing appreciable soluble iron, and (*d*) washing in machines with surfaces contaminated by bacteria.

The importance of washing eggs in water warmer than the eggs to reduce bacterial contamination is well established. Too great a temperature differential may, however, stress the eggs and cause an increase in cracks or checks (*88*). High bacterial loads in the washwater can lead to infection even if proper temperature differentials are maintained (*10*). The types of bacteria present are also important as most bacteria will not cause rots even if they penetrate the shell (*5,6,21,30*). In all experiments, some eggs did not develop rots or show evidence of internal contamination even when exposed to bacteria under conditions favoring penetration of the shell. The reasons for differences in resistance to penetration by bacteria are not clear although there is some evidence that eggs with thicker shells are more resistant (*55,73*).

Content of iron in the washwater appears to be of critical importance. The role of iron in accelerating development of rots has been clearly established. Garibaldi and Bayne (*31*) noted that some eggs washed in water containing iron developed sours in 2 to 3 weeks which is within the usual marketing period for fresh eggs. In the absence of iron, development of rots is likely to be so slow as to not be a problem if eggs are marketed promptly, particularly if eggs are kept refrigerated.

Available chlorine in the washwater will rapidly and quantitatively oxidize any ferrous iron present to ferric iron. This reaction is the basis of an analytical method for available chlorine. The ferric iron will precipitate as insoluble ferric hydroxide. The precipitated ferric hydroxide presumably is less available to bacteria than soluble ferrous iron. The possibility has not been investigated, however. Garibaldi and Bayne (*31*) did their experiments on the effect of iron in washwater in a machine using a chlorine-based washing compound. As the experimental eggs were not washed until after several cases were put through the washer, it is not known if any residual chlorine was present at that time.

A sanitizing rinse following washing is required in egg processing plants operating under Federal Grading Service (*85*). There is little documentation as to the value of such a rinse. It has been repeatedly found that washing or rinsing eggs in a sanitizing agent is relatively ineffective in improving storage life of eggs or removing *Salmonella* when the bacteria are deeply embedded in the shells before washing or rinsing. Washing eggs in a sanitizing agent (chlorine or quaternary ammonium) was found better than a water wash in reducing surface bacteria on eggs and in the egg meat when the eggs are broken out (*65*). However, Forsythe et al. (*23*) found that washing in a household detergent (Vel) was as effective as a QAC (Roccal) in reducing surface bacteria.

At the present time, few eggs are held in long term storage. Most which are not promptly marketed as fresh eggs are diverted to breaking operations. With these marketing practices, long-term storage life is of no concern.

However, if it is necessary for some reason to store shell eggs for extended periods, consideration should be given to the fact that substantial spoilage losses have been observed in some lots of commercially washed eggs held in long-term storage, even when apparently satisfactory washing practices were followed (*11, 84*). Keeping quality of nest-clean eggs, on the other hand, has been found to be consistently high with spoilage losses usually 1% or less. Keeping quality of unwashed dirty eggs was usually poorer than that of nest-clean eggs. Therefore, on the basis of presently available information, only nest-clean unwashed eggs can be recommended for long-term storage. Washing, if desired, should be deferred until shortly before ultimate use.

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JUN 19 1985

Mr. Joseph M. Murphy
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Dear Mr. Murphy:

This is to confirm our May 13, 1985, meeting with you and your client, Mr. Michael Maynard, regarding the use of the Centrifuge, Model 81081-982, manufactured by Miss Manufacturing, Inc., and accepted for use in federally inspected meat and poultry plants.

As stated in my April 9, 1985, letter, our Agency, the Food Safety and Inspection Service, issues and enforces regulations for meat and poultry products. We do not have jurisdiction concerning egg products in egg breaking plants. The Poultry Division of the Agricultural Marketing Service (AMS) has this authority. However, we do have responsibility for assuring that any operation in a federally inspected meat or poultry plant be carried on in accordance with the regulations that pertain to meat and poultry products.

The Code of Federal Regulations, Title 9, Section 308.5, Equipment and Utensils, covers acceptance of equipment and utensils used in federally inspected meat plants. The use of your centrifuge as an egg breaking machine is prohibited by Section 308.5(a) which states inpart, ". . . and insure cleanliness in the preparation and handling of all edible products and otherwise avoid adulteration . . .". The use of your machine as you describe it could result in adulteration of the product with bacteria from the shell as well as from debris that could be dumped from the packaging material into the machine.

Our March 29, 1984, letter did not rescind our acceptance, but instead clarified the proper use of the equipment. We have no objection to this piece of equipment being used as a centrifuge and will continue to list it as acceptable in our publication, "Accepted Meat and Poultry Equipment."

We appreciate your time and interest in meeting with us on this matter.

Sincerely,

John W. McCutcheon
Deputy Administrator
Meat and Poultry Inspection
Technical Services

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June 28, 1985

Mr. John W. McCutcheon
Deputy Administrator
Meat and Poultry Inspection
Technical Services
USDA, FSIS, MPITS
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Re: MiSa Mfg. Inc.
(Egg Breaking Machine)

Dear Mr. McCutcheon,

With great disappointment, I acknowledge receipt of your letter dated June 19, 1985 disapproving use of the MiSa Model 81081-982 centrifuge as an egg breaking machine in federally inspected meat and poultry plants.

Frankly the reason for your adverse decision, as set forth in your letter, troubles me in that you merely conclude that use of the machine, "could result in adulteration of the product with bacteria from the shell as well as debris that could be dumped from the packaging material into the machine", without offering any facts to support that conclusion.

I remind you that the MiSa Machine was thoroughly tested on October 17, 1983 as an egg breaking machine at Maria & Son in St. Louis, Missouri, (a USDA inspected meat and poultry plant), pursuant to CFR, Title 9, Section 308.5 and found to be acceptable in all respects under that section. That approval was later rescinded, not under Section 308.5 because of evidence of contamination but rather, under CFR, Title 7, Section 59.522(f) a regulation clearly applicable only to federally inspecting egg breaking room operations, and only after pressure was brought to bear, on your department, (Karen Darling), by representatives of the egg breaking industry whose motives in doing so are highly suspect.

Mr. John W. McCutcheon
June 28, 1985
Page Two

There is simply no evidence to support your fear that the machine produces an adulterated product. To the contrary, there is abundant evidence to support MiSa's position that the machine, used properly, does not contribute to contamination. For example:

1. MiSa has sold 514 machines in the United States since August 1982 specifically for egg breaking use, and not one incident of bacteria or other contamination has ever been reported.

2. Liquid egg samples processed through the machine were thoroughly tested by the Hawaii State Health Department for possible salmanella content. The results of those tests show negative salmanella contamination. (see report attached as exhibit "A").

3. The machine has been tested and approved under NSF Standard No. 8 by the United States Testing Company. (see report attached as exhibit "B").

4. The machine has been tested and approved by BISSC. (see report attached as exhibit "C").

5. Our meeting with FDA in January 1985 resulted in a favorable bulletin to their field offices dated February 25, 1985 (copy attached hereto as exhibit "D").

Further, I believe that your reliance on 9CFR 308.5 in disapproving the machine as an egg breaking device is misplaced. Section 308.5 is directed to equipment, and its sole purpose is to establish a procedure to determine that equipment used in federally inspected plants is cleanable and that the construction of the equipment and the material used is non-contaminating, nothing more, nothing less.

The MiSa machine conforms in all respects to the requirements of Section 308.5 and has in fact twice been approved by your department, first in October 1983, and again at our May 13, 1985 meeting in Washington.

In reality, what you now seek to control is the process, not the equipment. The process, in this instance, is the separation of liquid egg from its shell. wherein the liquid is temporarily comingled with the shell thus causing possible contamination of the liquid if the shell contains bacteria. In doing so you exceed the scope and intent of Section 308.5 and you have thus exceeded your authority. That you are overreaching is further demonstrated by the fact that your reasons for denial now are not the same as those given on March 29, 1984 when your department rescinded its earlier approval of the Model 81081-982 as an accepted egg breaking machine.

As was pointed out to you and others present at the May 13th meeting, the MiSa machine neither adds to nor removes contaminates. (this is also true of egg breaking apparatus used in official egg breaking plants). If fresh eggs delivered to a meat and poultry plant (or an egg breaking plant) are contaminated it is more than likely that the liquid will also become contaminated. This is true whether or not the MiSa machine or some other method is used for breaking. It is paradoxical then that the real responsibility rests with USDA, for USDA is the agency responsible under the Egg and Egg Product Inspection Act (chapter 15, Title 21, United States Code), to assure that only clean, wholesome and unadulterated eggs enter the stream of commerce. It is precisely because of this potential for contamination inherent in all eggs, that liquid, frozen and dried egg products produced in official plants are required to be pasteurized. And, it is also, for this reason, that MiSa, in cooperation with the FDA, modified its user instructions to require the user to (1) use only USDA sanitized eggs, grade B or better, (2) visually inspect eggs for dirt or broken shell (CAUTION, if eggs are dirty or cracked DO NOT USE!, return to suppliers for refund or credit), (3) use liquid egg mixture only in products to be cooked or baked for at least 3.5 minutes at temperatures of 140°F or higher, (pasteurization).

By following MiSa's simple instructions as outlined above, the user is assured of a product at least as wholesome as that from an official egg breaking plant because the risk of contamination or spoilage from transporting is completely eliminated.

For the reasons stated herein I urge you to reconsider your action. If you cannot do so, it is MiSa's desire to have the matter set for hearing pursuant to 7CFR 381.53(5)(b) in accordance with applicable rules of practice. In either event, in the interest of justice and fair play, I request that you withhold circulation of your June 19 letter so as to maintain a status quo until the matter is finally resolved.

Very truly yours,

JOSEPH M. MURPHY

JMM/mc
Encl.
cc: MiSa Mfg., Inc.
FDA:
John M. Taylor
Arthur Banks
Raymond Newberry
Bill Wollschlager

BY EXPRESS MAIL
B29632250

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HAWAII 96801

LESLIE S. MATSUBARA
DIRECTOR OF HEALTH

In reply, please refer to:
EPHSD

April 4, 1985

Mr. Dickey Nitta
Vice President
Rocky Road Products
Waimanalo, HI 96795

Dear Mr. Nitta:

The Department has completed its salmonella study for eggs broken by Egg Master, a centrifugal egg breaking machine.

The eggs sampled came from Rocky Road, Hawaiian Maid, and a "mainland" distributor. Sampling was done in situ at three hotel kitchens.

Samples were drawn as follows:

1. One hundred twenty-four (124) samples of 100 grams each from 41.5 cases of freshly broken eggs using Egg Master machine.
2. Ten (10) samples of 100 grams each from stored refrigerated fluid eggs.
3. Nine (9) samples of broken egg shells.

No salmonella was found in any of the samples.

The Department concludes that the Egg Master is capable of producing a safe egg product. It is stressed, however, that the operator of the device also has a role in the safety and wholesomeness of the egg product. Please continue to inform your Egg Master customers of the operation and maintenance requirement of the machine. We have no objections to its continued use.

Sincerely yours,

Melvin K. Koizumi

MELVIN K. KOIZUMI
Deputy Director for Environmental Health

MKK:lc
cc: Division Chief, EPHSD

EXHIBIT A

United States Testing Company, Inc.
California Division

EST 1880

5555 TELEGRAPH ROAD, LOS ANGELES, CALIFORNIA 90040
TELEPHONE: LOS ANGELES–213/723 7181
FROM SAN FRANCISCO–415/928-5855

REPORT OF TEST

Misa Manufacturing, Inc.
7766 Westminster Avenue
Westminster, CA 92683

"EGG MASTER" EXTRACTOR

May 24, 1983

TEST REPORT NO LA 30503

SIGNED FOR THE COMPANY

BY

Barbara Belmont
Barbara Belmont
Manager/Chemistry

Supervised by: Bernd S. Givon
Vice President

K. McDonald
K. McDonald
Chemical Technician

Page 1 of 9

ml

Laboratories in: New York • Chicago • Los Angeles • Tulsa • Memphis • Reading • Rich

THIS REPORT APPLIES ONLY TO THE STANDARDS OR PROCEDURES IDENTIFIED AND TO THE SAMPLE(S) TESTED. THE TEST RESULTS ARE NOT NECESSARILY INDICATIVE REPRESENTATIVE OF THE QUALITIES OF THE LOT FROM WHICH THE SAMPLE WAS TAKEN OR OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS. NOTHING CONTAIN IN THIS REPORT SHALL MEAN THAT UNITED STATES TESTING COMPANY, INC. CONDUCTS ANY QUALITY CONTROL PROGRAM FOR THE CLIENT TO WHOM THIS TEST PORT IS ISSUED. UNLESS SPECIFICALLY SPECIFIED, OUR REPORTS AND LETTERS ARE FOR THE EXCLUSIVE USE OF THE CLIENT TO WHOM THEY ARE ADDRESS AND THEY AND THE NAME OF THE UNITED STATES TESTING COMPANY, INC. OR ITS SEALS OR INSIGNIA ARE NOT TO BE USED UNDER ANY CIRCUMSTANCES IN AD TISING TO THE GENERAL PUBLIC AND MAY NOT BE USED IN ANY OTHER MANNER WITHOUT OUR PRIOR WRITTEN APPROVAL. SAMPLES NOT DESTROYED IN TEST ARE RETAINED A MAXIMUM OF THIRTY DAYS

EXHIBIT B

REFERENCES

1) Tests and charges were authorized by Mr. Mike Maynard, President, in conference commencing May 12, 1983.

2) Egg Master Manual of Instructions and Specifications.

3) National Sanitation Foundation, Food Service Equipment, Basic Criteria C-2.

4) National Sanitation Foundation Food Preparation Equipment Commercial Powered, Standard Number 8.

SAMPLE DESCRIPTION

One Egg Master Egg Extractor, Model 81081-982, Serial No. 82-177, was submitted and identified by the Client.

REQUEST AND METHOD

The Egg Master was examined and evaluated for compliance with National Sanitary Foundation Standard No. 8 and Basic Criteria C-2, as applicable, regarding sanitary, cleanability, construction and performance requirements.

RESULTS

N.S.F. STANDARD NO. 8

Section 3 Materials	Requirement	Sample Findings
3.5 Welding	Weld area and deposited weld material shall be equally as corrosion resistant as parent material.	Complies. Evaluated by adapted procedure of ASTM B-380, Corrodkote Method.
Section 4 Design and Construction		
4.1 Cleanability	All food contact surfaces shall be readily accessible for cleaning and inspection either in an assembled position or when removed.	Complies. All food surfaces readily accessible. for cleaning and inspection when removed; egg shell basket somewhat awkward to clean. (See Note 1).
4.1.2	In equipment of such design that heavy duty or high speed operation is intended, all parts which require cleaning shall be accessible by use of simple tools and shall result in thorough cleaning and sanitizing of the equipment.	No tools needed to disassemble equipment.
4.2 Function	Equipment shall be designed and constructed so that food(s) can be added and the finished product dispensed or removed in a sanitary manner.	Eggs introduced and dispensed from equipment in a sanitary manner.

RESULTS (Cont.)

N.S.F. STANDARD NO. 8

Section 4 Design and Construction (Cont.)	Requirement	Sample Findings
4.6 Fastening Methods	Exposed stud, threads, screw, heads, nuts and studs shall be eliminated from food contact surfaces; provided, however, that when exposed or unexposed threads are necessary, because of functional requirements they shall be ANSI B1.8 Stub Acme screw threads or 60° Stub thread or equal.	Unexposed threads necessary to functional requirements; uses UNF fine thread. (See Note 3)
Splash and Non-Food Contact Surfaces		
4.8 General Design and Construction	Equipment shall be designed and constructed in such a manner as to minimize the retention of moisture and dust, the shelter of vermin and dirt and to facilitate inspection, servicing, maintenance and cleaning.	Complies.
4.10.1 Interior Fastenings	In areas subject to cleaning, interior fastenings shall be accomplished in a manner as to minimize projections, ledges and recesses.	Complies

RESULTS (Cont.)

N.S.F. STANDARD NO. 8

General	Requirement	Sample Findings
4.11.5 Movable	A unit intended to be moved for cleaning the area beneath shall not exceed 80 pounds (36.3kg) in weight and shall have no utility connection or have a connection than can be easily disconnected without tools.	Passes. Unit weights 65 pounds; utility connection disconnects with ease.
4.13 Motors	Motor enclosures or motors not located in such enclosures shall be drip proof.	Motor is drip proof.
4.14 Doors and Covers	Covers shall be manufactured to conform with the standard of manufacture and shall be sized to fit and close properly.	Round cover conforms with standard of manufacture and sized to close properly.
4.14.1 Single Panel	Single panel covers shall be fabricated in such a manner to minimize the collection of soil particles, spillage and other foreign matter.	Complies.
4.16.2 Entry	All joints and seams where piping, equipment, rotary shafts and other functional parts extend into food storage compartments shall be closed and sealed at the point of entry or a properly designed deflecting apron provided.	Rotary shaft closed and sealed at point of entry.

RESULTS (Cont.)

N.S.F. STANDARD NO. 8

General	Requirement	Sample Findings
4.19 Welding	Whenever welded areas are used in food contact surfaces, such weld areas shall be smooth.	Weld areas smooth with mirror finish.
Section 5 Specific Design & Construction		
5.1.2 and 5.4.5	Components shall be stainless steel or equivalent.	Components certified as A.N.S.I. 304 stainless steel.

N.S.F. C-2

General	Requirement	Sample Findings
Section 2 Definitions		
2.1.1 Easily Cleanable	Readily accessible and of such material and finish and so fabricated that cleaning can be accomplished by normal methods.	Cleaning was accomplished by normal methods even after residue had been permitted to dry 24 hours.
2.7 Sealed	Having no openings that will permit the entry of dirt or liquid seepage; applies to joints and seams.	Opening where finished product is dispensed not sealed. (See Note 2)
2.8 Smooth	A surface free of pits and inclusions having a cleanability to the following:	Surface free of pits and inclusions.
	Food Contact Surfaces: No. 3 (100 grit) finish on stainless steel.	Has mirror finish, i.e., superior to No. 3 finish.

RESULTS (Cont.)

A sealant identified by the Client as Silastic 732 RTV Adhesive/Sealant was used in the outer shell of the Egg Master. Silastic is a silicon-based polymer allowed for use in food contact surfaces per para. 177.2600, Chapter 1, Title 21, Code of Federal Regulation.

Note 1: The interior basket (the eggshell basket) has a double turned, reinforced rim cavity from which the shell remnants must be removed by cleaning immediately.

Note 2: A cover is recommended over the finished product discharge tube to prevent ingress of dirt when the machine is not in use.

Note 3: Although the thread on the stud and mating wing nut are of "fine" gauge they are not exposed when the basket is assembled, ready for use, and therefore, do not collect residues.

COMMENTS

The following applicable sections of N.S.F. Food Service Equipment Basic Criteria C-2 were also addressed in N.S.F. Commercial Powered Food Preparation Equipment Standard No. 8:

3.1 Food Contact Surfaces
3.2 Splash Contact Surfaces
3.3 Nonfood Contact Surfaces
3.4 Welding
3.8 Plastics
4.1 Cleanability
4.2 Function
4.5 Joints and Seams
4.6 Fastening Methods
4.7 Finishing
4.22.2 Entry Points
4.28 Portable/Tiltable

CONCLUSIONS

The Egg Master Model 81081-982 egg extractor meets the requirements for sanitary design and performance, as detailed in the above results for testing to compliance with N.S.F. Standards.

* * * * * *

BISSC
CERTIFIED

Authorization No. 351

This Is To Certify That

Name MISA MFG., Inc.

Address 7766 Westminster Avenue, Westminster, CA 92683

is hereby authorized to apply the BISSC symbol to the models of equipment, listed below, conforming to the Baking Industry Sanitation Standards Committee Standards

No. Basic Criteria Dated 10/01/81

For "Egg Master" Model #81081-982

Model Designations

for the twelve months ending December 31, 1984

Date of Issuance: December 31, 1983

William E.

Director of Certification
BAKING INDUSTRY SANITATION STANDARDS COMMITTEE

• • • • •

The issuance of this authorization for the use of the BISSC symbol is based upon the certification, by the applicant for it, that the equipment listed above complies fully with the Baking Industry Sanitation Baking Industry Sanitation Standards Committee standards designated. Legal responsibility for compliance is solely that of the holder of this Certificate of Authorization, and the Office of Certification of the Baking Industry Sanitation Standards Committee does not warrant that the holder of an authorization at all times complies with the provisions of the said Office of Certification. This in no way affects the responsibility of the Baking Industry Sanitation Standards Committee to take appropriate action in the cases in which evidence of non-compliance has been established.

Form No. 1-A

EXHIBIT

BAKING INDUSTRY SANITATION STANDARDS COMMITTEE

OFFICE OF CERTIFICATION

Application
for
Authorization to Apply the BISSC Sanitary Standards
Symbol to Bakery Equipment

Name of Applicant Misa Mfg., Inc.

Address 7766 Westminster Ave., Westminster, Ca. 92683

Name of Manufacturer Misa Mfg., Inc.

Address 7766 Westminster Ave., Westminster, CA. 92683

hereby applies to the Office of Certification of the Baking Industry Sanitation Standards Committee for authorization to apply the BISSC symbol to the following:

MODEL DESIGNATIONS: "Egg Master" Model #81081-982

of Egg cracking, extracting and blending machine.
Type of Equipment

(List on page 4 models for which space above is inadequate.)

Declarations of the Applicant (as provided for in ARTICLE VII, Section C, of the By-Laws of the Office of Certification of the Baking Industry Sanitation Standards Committee).

It is hereby declared and affirmed that the models of the equipment herein listed conform in all respects with the currently effective BISSC Standards

No ______ Dated ______

For Basic criteria standards

It is also hereby declared that the signer of this application has read and will abide by the rules of the Office of Certification of the BISSC, as set forth in ARTICLES V, VI, and VIII of the By-Laws governing the Office of Certification of the BISSC.

Form No. 1

It is also affirmed that the applicant will maintain, for the duration of the authorization for which application is hereby made, an organized system of inspection during the manufacture and assembly of the equipment.

The applicant understands that the issuance of an authorization for the use of the BISSC Symbol is based upon the voluntary certification, by the applicant for it, that the equipment listed in the application fully complies with the BISSC Sanitation Standards named. It is further understood that when an authorization has been issued, the legal responsibility for compliance is solely that of the holder, and the BISSC Office of Certification will not warrant that the holder will at all times comply with the provisions of the said BISSC Sanitation Standards.

This understanding in no way affects the responsibility of the BISSC Office of Certification to take appropriate action in cases in which evidence of non-compliance with the said BISSC Sanitation Standards has been established.

DATE: Nov. 1, 1983

SIGNATURE: C. McMaynard POSITION: President

Applications shall be filed on forms supplied, in duplicate, by the BISSC Office of Certification, the duplicate to be kept by the applicant. Application shall be submitted to the Office of Certification, Baking Industry Sanitation Standards Committee, 521 Fifth Avenue, New York, New York 10017. Application shall apply to only one of the types of baking equipment to which BISSC Sanitary Standards pertain.

Every application shall be accompanied by (ARTICLE VII, Section D):

1. A statement as to whether the applicant is or is not the manufacturer of the models listed in the application. If the applicant is a non-manufacturer, the name(s) and address(es) of the manufacturer(s) shall be supplied to the BISSC Office of Certification.
2. A Statement by the applicant, attesting that the equipment for which certification being sought, complies with all provisions of the Standard named in the application, signed by an officer of the applicant concerned.
3. A specimen or a drawing giving exact dimensions and full text (not including data for specific models) of the name-plate to be employed. This name-plate is to include the BISSC Standard number and effective date, or an additional identification plate be used carrying the BISSC Standard number and effective date, which would be mounted close to the name-plate.
4. A specimen of the BISSC Symbol to be employed, or a drawing showing the dimensions, and a sample and description of the material to be used, and the manner of its attachment.
5. The application fee of $50 made payable to the BISSC Office of Certification.

PERIOD OF EFFECT, AND RENEWAL OR AMENDMENT OF AUTHORIZATION

ARTICLE VIII (ABSTRACTED)

A. Each Authorization shall remain in effect for a period of one (1) year, and may be extended by renewal for a period of one (1) year, as provided in Sections (D), (E), and (F) below, except that Authorizations or Renewals of Authorizations predicated upon BISSC Sanitation Standards which have been revised since the issuance or renewal of the said Authorizations may be issued for periods equal to the unexpired periods of the said Authorizations or Renewals of Authorizations.

B. When BISSC Sanitation Standards are revised, no Authorization or new Renewals of Authorizations predicated upon the BISSC Sanitation Standards in effect prior to the revision shall be valid beyond the date upon which the revised BISSC Sanitation Standards become effective. Applications for Authorizations or Renewals of Authorizations predicated upon the revised BISSC Sanitation Standards shall be treated as new applications, and shall conform to the provisions of ARTICLE VII.

C. When a holder of an Authorization wishes to add one or more models of equipment conforming to the BISCC Sanitation Standards upon which an Authorization or a Renewal of Authorization in effect was predicated, the Authorization or Renewal of Authorization may be amended upon the filing of an application (or applications) by the non-manufacturer and manufacturer(s), supported by pertinent data required in ARTICLE VII, Section C. Authorization or Renewals of Authorizations so amended shall not be effective prior to the date on which the amended or supplemented BISSC Sanitation Standards become effective.

Amended Authorizations or Renewals of Authorizations shall expire on the date on which the original Authorization or Renewals of Authorizations would have expired.

D. Each holder of an Authorization shall be notified by first class, registered mail, at least thirty (30) days before an Authorization, Renewal of Authorization, or amended Authorization expires, and shall be furnished a form for application for renewal of the Authorization or Renewal, or shall be notified that the Authorization cannot be renewed, as the case may be.

G. Authorizations and Renewals of Authorizations may be relinquished by holders thereof.

I. The right of the holder of an Authorization or Renewal of Authorization to use the BISSC Symbol on the equipment covered by the Authorization shall cease upon the cancellation or termination of the said Authorization or Renewal Authorization by the BISSC Office of Certification.

J. Information regarding relinquishment and cancellation of Authorizations or Renewals of Authorizations may be prepared for distribution (a) in mimeograph or other form; or (b) in an issue of the trade press publications.

L. The BISSC Symbol is the property of the Baking Industry Sanitation Standards Committee and shall remain the property of the Baking Industry Sanitation Standards Committee, and can be recalled under the procedures outlined in the Office of Certification By-Laws.

UPMAIL -DCC -SCHD
MAIL ALL-DOS 'EGG MASTER'

FR: Office of Compliance, HFF-300

SB: Egg Master Machine, MiSa Mfg., Inc., Westminister, California

TO: All Regional Directors
All District Directors

****
THIS MESSAGE IS BEING RESENT AS A CORRECTED COPY
****

We have received a number of complaints from M.E. Maynard, president of MiSa Mfg., and his attorney, Joseph Murphy concerning comments, written and oral, by our field people stating that the Egg Master egg extractor is "banned" and may not be used in food service establishements or other food establishments.

We have no proof that the machine itself contributes any filth or food additive to the eggs. In fact it is stainless steel and is easily cleanable. While we recognize there is a potential for misuse of the machine by using eggs that may contribute filth to the liquid eggs, such adulteration would be caused by the user and not by the machine.

To ensure that the machine is not only used properly but also to avoid even accidental contamination, the firm is revising its instructions to state: (1) use only USDA sanitized eggs, Grade B or better, (2) visually inspect eggs for dirt or broken shell (caution: if eggs are dirty or cracked, do not use!), (3) use liquid egg mixture only in products to be baked or cooked, and (4) for use in uncooked end products, use pasteurized eggs or hand crack your eggs.

Since we do not have the authority to approve or disapprove Egg Master machine under any of the acts or regulations we administer, we should not be advising either state governments or firms that the machine is either banned or imply that it is banned by saying it is "not approved".

Instances of misuse of the machine should be documented and handled on a case by case basis. We will continue to review any studies that become available and any documented misuses to ascertain whether the actual or potential instances of adulterated eggs attributed to this machine are sufficiently isolated to warrant the issuance of a "Letter of Acceptance" as provided under IOM 312.13.

John M. Taylor

EXHIBIT D

UNITED STATES
DEPARTMENT OF
AGRICULTURE

Food Safety
and Inspection
Service

Washington, D.C.
20250

July 03, 1985

COPY

Mr. Joseph M. Murphy
Attorney at Law
4000 Macarthur Boulevard
Suite 990
Newport Beach, CA 92660

Dear Mr. Murphy:

This letter is to confirm receipt of your June 28, 1985, letter to comment on your request for a hearing under 7 CFR 381.53(5)(b) and to address other points raised in your letter.

Maria and Sons (Est. 8691) in St. Louis, Missouri, is a federally inspected meat processing plant. Therefore, 9 CFR 381.53(5)(b) (poultry plant regulations) does not apply to this establishment. There are, however, similar regulations in 9 CFR 308.5(a) and (f). Please note that a formal hearing is available under this regulation to establishment officials only as applicants for approval of the equipment. However, we will be glad to meet informally with you if you have additional or new information to present.

Regarding the evaluation of the Misa machine, Mr. Cranford Hussey's October 18, 1983, letter states inpart ". . . nor should it be considered as an approval of processing methods . . .". This statement restricts the acceptance to the design, construction and materials of the machine.

Again, I point out that Mr. Royal Oyster's March 29, 1984, letter did not rescind our acceptance, but instead clarified the proper use of the equipment as permitted by Section 308.5(d) which states inpart ". . . he may prescribe such conditions of use of particular models of equipment or utensils, either on a trial or permanent basis, as he finds necessary to prevent adulteration or misbranding . . .".

Mr. Murphy, you will recall from our telephone conversation that our reason for stopping the use of the Misa machine as an egg breaker was our concern that it could lead to contamination of product with Salmonella or other organisms of pathological significance. If you would like to meet with me again concerning our position, please give us a call.

Sincerely,

/s/

John W. McCutcheon
Deputy Administrator
Meat and Poultry Inspection
Technical Services

Mr. Volkmer. All right. I yield to the gentleman from Iowa.

Mr. Bedell. I need to understand, did FSIS check this machine and indicate that they thought it was safe to be used for egg breaking?

Mr. Kennett. They checked the machine and asked us if we thought it was safe to be used as an egg breaker.

Mr. Bedell. If they checked it, then surely they shouldn't ask somebody else whether it is safe or not. They checked the machine, is that correct?

Mr. Kennett. They did. That's correct.

Mr. Bedell. Are you telling me that they checked the machine but they didn't decide, then, after they checked the machine, whether it was safe to be used or not?

Mr. Kennett. They checked the machine as an egg breaker. They knew we had the knowledge as an egg breaker, so they asked us, and that's where we miscommunicated. They checked the machine for—I think this is an area that needs clarifying. We talk about machines a lot, and centrifuges and blenders and mixers. There's a lot of machines that could break eggs. We look at a process or a concept, not the machine itself. Would the use of the machine break eggs in accordance to the act and the regulations?

So we're getting hung up in the use of the machine, and this is what I alluded to earlier. A machine could be sanitary, easy to clean, but not fit into the process, not—and, as Mr. Handley said, you wouldn't be able to examine each individual egg, or it would commingle the shell, which may have bacteria. So yes, they looked at the machine for sanitation, probably, for construction, and they asked us, "What do you think of it as an egg breaker," and we miscommunicated.

Mr. Bedell. Well, the testimony said they approved it. Is that testimony incorrect?

Mr. Kennett. No; they originally approved it.

Mr. Bedell. They did approve it?

Mr. Kennett. And then rescinded it.

Mr. Bedell. And then rescinded it, OK, but I am just trying to find facts here. In regard to the fact that you require in the egg-breaking facilities that every egg be broken and individually inspected after it is broken, this machine would bypass that. Some people have testified that in grade A and B eggs, there really is no particular need for inspection and indeed if a restaurant gets an A or a B egg and breaks it and looks at it and goes ahead and cooks it, there is still that opportunity certainly for contamination from the shell, maybe not to the same extent, but it is certainly there. I have had scrambled eggs in restaurants where I have had eggshell in them, so there is that potential.

The answer I would like to know is, what is the problem involved with grade A or grade B eggs if they are not visually inspected?

Mr. Kennett. Insofar as egg products plants are concerned——

Mr. Bedell. As far as health concerns.

Mr. Kennett. OK, as far as health, and in the egg products plants where we have jurisdiction, we feel——

Mr. Bedell. No; that's not my question, because they have lower grade eggs. My question is—and I want to be sure you understand my question—in grade A and B eggs, if those eggs are not visually inspected after breaking, what is the health concern, if any?

Mr. **Kennett**. I am going to address that.

In those plants where we are, if they are breaking grade A eggs—and they may very well do that—we would like to look at individual eggs because even in grade A eggs, you can have an occasional bad egg. The-state-of-the-art is such, you can't remove them all.

Mr. **Bedell**. And what is the health hazard if there is a bad egg?

Mr. **Kennett**. Well, there are two. One is a health hazard. One is strictly an aesthetic deal.

Mr. **Bedell**. Aesthetics, the restaurant ought to be concerned about aesthetics. We are concerned here about health hazards. What is the health hazard in a grade A or B egg that gets through without a visual inspection?

Mr. **Kennett**. There are certain types of rotten eggs, that are rotten because of bacteria, that are a health hazard, and they can be in a grade A egg. It could be missed in the candling process. There are certain other types that might make an egg unfit for human consumption. You wouldn't want to eat it, probably, if you knew it, but it wouldn't hurt you, so this is why I say there are two reasons. There are some eggs that could pass—very few, very rare—that would be a health hazard in grade A eggs if you don't examine them. That is what we feel, in official plants. That's why we look at them.

Mr. **Olin** [acting chairman]. Are there any other questions by the subcommittee?

[No response.]

Mr. **Olin**. If not, thank you very much, gentlemen.

Would the next panel please come forward?

Mr. **Thomas**. Mr. Chairman?

Mr. **Olin**. Excuse me. Mr. Thomas?

Mr. **Thomas**. I'm sorry. I was distracted there for a moment. Might I have just a moment before this panel leaves?

Mr. **Olin**. Yes; the gentleman from Georgia.

Mr. **Thomas**. I thought your comment there, Mr. Kennett, was a very important one too, and I just wanted to illuminate on it a minute. This has been my feeling all along.

I personally have never had any doubt that this machine, being simply constructed as it is of stainless steel, that it is very capable of being cleaned. I have never seen the machine as the risk or threat, but we still go back to this one thing, whether it is a grade A, a grade B, or any other egg, in my way of thinking—and I want you to correct me if I am wrong—and that is that due to the very unique nature of the shell of an egg, which is porous and which to the best of our ability there is no way of completely assuring us, regardless of what grade of egg it is, that we have removed all bacteria or foreign matter, whatever type it might be, from the pores embedded in the egg. There is no process that we know of that can do that.

But aren't we, in the final analysis, right back down to one point, and that is the question of whether or not we really think that we should not, in preparing eggs for human consumption, in any process and in any manner, as to whether or not a process that mixes, again, the egg—I don't care if it has been sterilized, and there is no such thing, I understand, as a sterilized egg, is that correct?

Mr. Kennett. That's correct.

Mr. Thomas. OK. As to whether or not we are going to accept a process and we find acceptable a process which does commingle the shell of an egg, porous and a harbor for foreign matter and salmonella bacteria as well as other things, or whether we are not. Isn't that really what the whole debate is all about here today, or is it? Am I mistaken?

Mr. Kennett. I think that's one—that question is one point that the Department has not wavered on. In Mr. Handley's original testimony in July and again this morning, he reiterated what you just said: In official plants that's why we require eggs to not be commingled and the individual examination of each egg.

Mr. Thomas. In other words, according to all of our experience through the USDA and in egg-breaking plants and all of the things that have occurred up to now, would you say that it's your thinking that we should not in any sense of the—you don't see any way to come up with an acceptable format or a process through which we allow eggs to be broken in a manner that mixes the egg and the shell in that process.

Mr. Kennett. That has been our experience in official plants, yes.

Mr. Thomas. And from all evidence you have seen, you don't see why we should depart from that stand, do you, or not?

Mr. Handley. May I say something, Mr. Thomas?

Mr. Thomas. Yes; sure.

Mr. Handley. The bakeries, the other institutions that we are speaking of here where the jurisdictional question arises, do certain other things with that egg product that we don't do, and so I think that's why we are uncertain as to the final product that could be the potential health hazard as——

Mr. Thomas. Well, now wait a minute. Am I hearing you say here today that you are all of a sudden, since a bakery might take the egg and do something else to it, that you might change your position on whether or not the shell ought to be commingled?

Mr. Handley. No; we recognize that the commingling of the shell and the egg, there is no question that that has to heighten the exposure to and the potential for the risk of salmonella bacteria. I mean, there is no question. It just stands for reason that if you have it as a harbor, that when you mix the two you are going to heighten that possibility. What we are saying is, we don't know the extent to which that is heightened, and then the further processing done in the bakeries and other institutions could very well, you know, eliminate or certainly virtually eliminate that possibility.

Mr. Thomas. We probably have the technology to throw a drawn chicken with the feathers on it, still, into some machine that would grind it all up and separate the feathers, then, from the chicken. Wouldn't you imagine we've got that technology?

Mr. Handley. I don't know. We could have.

Mr. Thomas. Would you want to eat a chicken that had been processed in that manner?

Mr. Handley. Well, no, I wouldn't.

Mr. Thomas. Thank you, Mr. Chairman.

Mr. Olin. While you are still there, gentlemen, let me ask another question that comes to mind from the gentleman of Georgia's questioning. I would presume that the human body is tolerant of some degree of bacteria that, taken in larger quantity, would be harmful. We must take in germs of all kinds all the time. Do you have any tests that indicate, after eggs are processed in an acceptable way by all the different things you do—look at them, smell them, and so on—as to what level of bacteria or harmful germs of one type or another might be left, which would bear on whether or not the commingling of the shell with the liquid really is likely to produce a level of bacteria that is going to be harmful? Are there any laboratory tests of that nature that you know of?

Mr. Handley. I don't know of any laboratory tests. Perhaps Mr. Kennett does. I think what I have been told by the staff members of mine who inform me on the subject is that certain people have a greater tolerance for bacteria of all kinds, including salmonella. A healthy person will naturally have a greater tolerance than a person who is either very young, very old, or has some kind of illness that may weaken them.

Have there been studies done about the salmonella, Connor?

Mr. Kennett. I don't know of any at what levels to address your question specifically. I just don't know of any. Mr. Handley is right. It depends on the condition of your health. Some of us probably could take a big load of salmonella; others of us just couldn't.

Mr. Olin. OK. I just wondered were there any laboratory or other scientifically collected data that might bear on that subject. It could improve our knowledge of what to do in this case, if we had that. You don't know of any?

Mr. Kennett. I do not. There may be some. I just don't know of any.

Mr. Olin. All right, gentlemen. Thank you very much.

We will now move to the next panel, which consists of Mr. Albert Pope, president of United Egg Producers, Decatur, GA; Mr. Chuck Dynes, Dynes Poultry Farms, Burlington, WA; and Mr. Gilbert Eckhoff, Henningsen Foods, Inc., Omaha, NE. You gentlemen can come forward.

We would like to ask you, again, if you could try to confine your remarks to about 5 minutes or less in length, and your written statements will appear in the record in total in any event, and we will proceed. I will just go by the order on my list. We will start out with Mr. Pope.

STATEMENT OF ALBERT E. POPE, PRESIDENT, UNITED EGG PRODUCERS

Mr. Pope. Mr. Chairman, I want to thank you on behalf of United Egg Producers and its members for the opportunity to submit our testimony. I sincerely hope, after having the meetings, that you can get to the bottom, the real truth of the issue. It seems to me that it will be difficult and I think that we have to clarify a few things.

First of all, we have been portrayed as the "big bad guy" in this issue, made the heavy. We have 750 members at UEP, six of which are egg producers as well as further egg processors or breakers. You are looking at 25 percent of the UEP staff, so we are not real big and bad, or at least we don't think so.

It is kind of ironic, to clear up a couple of things, that we have a representative here from Hidden Villa Ranch, and this is the same ranch that provided the eggs for two on-site inspections where in fact the product did not meet grade B or better, and yet he says—and if anybody should know, it should be the distributor of the equipment—providing B eggs, and in the case of the on-site inspection the product didn't even meet grade B or grade A, so I think this is things that need to be cleared up.

Another one that I think is very important, and I will do it here in the subcommittee and I will continue to do it anywhere, I think in the testimony that Mr. Maynard gave he attacked a gentleman by the name of Mr. Connor Kennett, who is here today. I think that it is a very unwarranted attack on Mr. Kennett because I think that I hold—of all of the public servants that I have ever met in the Washington arena, Connor Kennett's credibility and reputation is probably the finest of anybody I have ever met. That is also recognized by his peers in Washington, and I would like to clear that up, because while it may look like there is some sort of interest between the two, I can tell you that Mr. Kennett has told me no lots of times, but he has been a credible representative and in fact an example of how industry can work together with Government, in my mind.

I would like to start today by saying basically that the consumer does have and has a right to expect and receive safe products. Use of the centrifuge for breaking threatens not only the public health but also the egg industry, as our financial security is dependent upon consumer confidence in the product we sell. Use of the centrifuge machine in bakeries and restaurants violates every regulation which is currently enforced in USDA-inspected egg product plants, and in doing so makes an absolute mockery of the Egg Products Inspection Act which was enacted in 1970.

In 1971, coincidentally enough—we talk about this invention and putting a man out of business—in 1971 when the Egg Products Inspection Act was implemented, 700 egg-breaking facilities that were then in operation, USDA walked to and said, "We're sorry, so-and-so, but we're going to have to stop this practice here," and in fact 700 of them were put out of business, many of them family farms, many of them our members. So we keep going to this Horatio Alger story here, and it's just ridiculous.

USDA knows the use of the centrifuge breaking equipment is unsafe. I think they have demonstrated that today. USDA prohibits the use of the centrifuge breaking equipment in processing plants, and for years USDA has been concerned about and has conceptually disapproved the centrifuge breaking equipment in bakeries and restaurants. USDA sought and received overwhelming affirmation from the scientific and food processing communities that such a prohibition was necessary. I would like to submit for the record those public statements and the copies of the internal USDA memoranda which document those statements.

Of course, it is for that reason, that is why we are finding it—that we can't understand why this Secretary of Agriculture is finding it so difficult to fulfill his responsibilities. Why, then, does USDA refuse to simply issue regulations prohibiting the use of centrifuge egg breaking in these establishments? Because one individual—and we have to give him surely credit for that—the manufacturer of the Egg Master, has successfully politicized this clearly nonpolitical issue, and in doing so has completely intimidated the U.S. Department of Agriculture.

Mr. Maynard, president and owner of MiSa Manufacturing, has portrayed himself as the modern-day Horatio Alger—an inventor, an entrepreneur, the man who set our restaurants and bakeries free. No longer will bakery employees be burdened with laborious, uneconomical hand breaking of eggs. Of course, USDA knows this Horatio Alger story is nothing more than a PR campaign, yet the Department has issued no less than four positions in support of, then nonsupport of, and then support of Mr. Thomas' amendment to prohibit the Egg Master.

I would like to take a real quick opportunity to critique Mr. Maynard's fiction by putting a few facts before this subcommittee. All statements attributed to Mr. Maynard and all rebuttals are documented, and I would like to submit those documentations for the record.

MiSa claims that centrifuge egg breaking is safer than hand breaking, as hand breaking presents the danger of consumers contracting AIDS from products made with hand-broken eggs. It's a lie, and proves only that the manufacturer will absolutely say anything to persuade consumers and Congress that the centrifuge breaking is preferable to hand breaking. It is not.

Mr. Maynard has successfully portrayed himself before Congress and in the press as the inventor of the centrifuge egg-breaking technology. The centrifuge, as we talked earlier, was patented for in 1893. Mr. Maynard is marketing what is now an old, discredited, and unsafe technology to bakeries and restaurants, after USDA on numerous occasions has refused to approve such equipment for use in official egg processing plants.

MiSa claims that any bacteria present in the raw egg product rendered by the centrifuge will be destroyed if the user follows the manufacturer's suggestion and cooks the product for 3.5 minutes at 140 degrees. MiSa claims that such heat treatment is the equivalent of pasteurization.

Heating to 140 degrees for 3.5 minutes is by no means a guarantee of destruction of bacteria including salmonella. Destruction of the bacteria by heat is not instantaneous but involves a progression reduction in the numbers with time. The more bacteria there are present initially, the more time it will take after the heating.

MiSa claims that numerous organizations have approved the centrifuge for use in breaking eggs for human consumption and that USDA regulations allow use of the centrifuge in processing plants.

These claims are not true. USDA/AMS and USDA/FSIS have indicated that the centrifuge is sanitarily designed and constructed. Similarly, the Bakery Equipment Sanitation Standards Committee has certified the equipment complies with its basic criteria. However, none of these organizations have approved the practice of using this equipment to break eggs for human consumption.

A letter dated October 11 and in earlier testimony and signed by the executive vice president, Tom Gable, of the National Sanitation Foundation concurs with USDA's position that centrifuge egg breaking is unsafe. The EggMaster does not carry the NSF seal which approved equipment bears.

The Atlantic City Health Department issue has been talked about for along time, and I will skip that.

Most important, United Egg Producers, November 4, formally petitioned the Department of Agriculture to issue such regulations and have attached to that petition a legal opinion rendered by counsel. Counsel is convinced that the Secretary of Agriculture does possess such authority. We don't have to write a bill for it, and the Secretary of Agriculture has a responsibility, and the continued prohibition of the centrifuge egg breaking in official USDA inspected plants while hotels, bakeries, and restaurants are permitted to use this technology is an inequitable enforcement of the existing laws and regulations.

We have learned that the American Law Division of the Library of Congress has issued an opinion which concurs with that of United Egg Producers and their counsel. And it was interesting to note that not once in USDA's testimony did they quote the legal authority stating that they do not have the right.

Thank you, sir.

[The prepared statement of Mr. Pope follows:]

Presented by

Albert E. Pope

President

United Egg Producers

TESTIMONY

Shortly over a year ago egg producers discovered that bakeries, restaurants and similar establishments were using centrifuge egg breaking machines to manufacture food for human consumption. This manufacturing practice is unsafe and is a health hazard because it involves crushing large quantities of eggs in a manner which commingles the egg shell -- a natural harbor for pathogenic bacteria -- with the egg interior thereby greatly increasing the risk of bacteria and salmonella poisoning. It is unsafe because the method does not allow for the inspection of the interior of each individual egg being broken -- thereby eliminating the ability of the user to remove a "rotten" or inedible egg before it contaminates the entire batch of product.

Use of the centrifuge for egg breaking threatens not only the public health, but also the egg industry. Our financial security is dependent upon consumer confidence in the product we sell, and continued use of the centrifuge can only undermine that confidence.

Salmonella is an extremely virulent food-borne infectious disease. For that reason, foods which may harbor salmonella must be handled and processed very carefully in order to minimize risk to the consumer. The importance of adhering to safe and sanitary practices when handling eggs led to the enactment in 1970 of the Egg and Egg Products Inspection Act. Since enactment of that legislation and the promulgation by the USDA of strict regulations governing the manufacturing practices which are required in egg processing, salmonella incidents associated with egg products have become virtually unheard of.

Use of the centrifuge egg breaking machine in bakeries and restaurants violates every regulation which is currently enforced in USDA inspected egg processing plants, and in so doing makes a mockery of the Egg Products Inspection Act.

When the EPIA was enacted in 1970, the Secretary of Agriculture was charged with the responsibility and empowered with the authority to issue regulations necessary for "assuring that eggs and egg products distributed to them [the public] and used in products consumed by them are wholesome, otherwise not adulterated, and properly labeled and packaged."

In 1971, the Secretary of Agriculture exercised this authority to promulgate regulations in accordance with his responsibility under the law. Very stringent egg processing regulations were established and the effect of their implementation was the closing of over 700 egg breaking facilities then in operation. The Secretary of Agriculture obviously considered his responsibility under the law and his responsibility to the public more important than the "rights" of irresponsible businessmen to turn a profit at the expense of the public. Such a decision was not controversial at the time and has never been questioned by industry, Congress or the public.

That is why we cannot understand why, in 1985, the current Secretary of Agriculture is finding it so very difficult to fulfill his responsibilities to the public, as defined under the law, and to exercise his authority, as defined under the law, by issuing regulations which would, in effect, simply close a loophole in the current regulations by prohibiting the use of centrifuge egg breaking in all commercial establishments, including bakeries and restaurants. The Secretary's failure to do so threatens to undermine the entire Egg Products Inspection Program and has necessitated the conduct of Congressional Oversight Hearings to deal with what is and should be an administrative issue.

USDA knows the use of centrifuge egg breaking is unsafe. USDA prohibits the use of centrifuge egg breaking in egg processing plants. For years USDA has been concerned about and has conceptually disapproved of centrifuge egg breaking in bakeries and restaurants. USDA has sporadically supported legislation which would prohibit centrifuge egg breaking in bakeries and restaurants. USDA sought and received overwhelming affirmation from the scientific and food processing communities that such a prohibition was necessary. [I would like to submit, for the record, public statements and copies of internal USDA memoranda which document the above statements.]

Why then does USDA refuse to simply issue regulations prohibiting the use of centrifuge egg breaking in these establishments? Because one individual, the manufacturer of the EggMaster, has successfully politicized this clearly non-political issue and in doing so has completely intimidated the United States Department of Agriculture.

Mr. Maynard, President and owner of Misa Manufacturing, has portrayed himself as a modern day Horatio Alger -- An inventor, an entrepreneur, the man who has set our restaurants and bakeries free! No longer will bakery employees be burdened with the laborious and uneconomical hand breaking of eggs. Not when there's an EggMaster around. And everyone should live happily ever after -- bakers and restauranteurs don't have to break eggs and Mr. Maynard grows richer by the day. But, no . . . enter the villain, the black hat (every fairy tale has a villain, this one is no exception). And who is the villain? The big bad egg industry. It seems that the big bad egg industry is spreading a lot of vicious gossip about the EggMaster. We're telling people it's unsafe. But of course our true motives are more sinister. The big bad egg industry is trying to bury the EggMaster and drive Mr. Maynard out of business in order to protect our monopoly and force restauranteurs and bakers to buy canned and frozen egg products. According to Mr. Maynard, our efforts are nothing short of downright un-American.

Of course, the U.S. Department of Agriculture knows this fairy tale is nothing more than a cleverly concocted PR campaign. But timidity and indecisiveness run deep at USDA, and the Department has issued no less than 4 flip flopping positions in support of, then not in support of, then in support of Mr. Thomas' amendment to prohibit the EggMaster.

USDA's inability to comment, much less regulate, confused Congress. So did Mr. Maynard's fairy tale. I would like to take this opportunity to critique Mr. Maynard's fiction by putting a few facts before this Subcommittee. All statements attributed to Mr. Maynard and all rebuttals are documented and I would like to submit that documentation to the record at this time.

1. FICTION

Misa claims centrifuge egg breaking is safer than handbreaking as handbreaking presents the danger of consumers contracting AIDS from products made with handbroken eggs.

FACT

This is a lie and proves only that the manufacturer will say anything to persuade customers and Congress that centrifuge egg breaking is preferable to hand breaking.

2. FICTION

Mr. Maynard has successfully portrayed himself before Congress and in the press as the inventor of the centrifuge egg breaking technology.

FACT

The centrifuge egg breaking technology was invented and patented by Martin J. Powers in 1893 as demonstrated in the attached patent. Nearly 100 years ago Mr. Powers thought this would be a labor-saving and economical way to break eggs.

Mr. Maynard is marketing what is now an old, discredited and unsafe technology to bakeries and restaurants after the USDA on numerous occasions has refused to approve such equipment for use in official egg processing plants.

3. FICTION

Misa claims that Consumer Grade B or better eggs can be safely crushed by the centrifuge and the shell commingled with the interior because all USDA Consumer Grade B or better eggs are washed and sanitized and do not carry bacteria or salmonella on the shell.

FACT

The majority of the nation's egg producers do not participate in the voluntary USDA Grading program. Even of those that do, the USDA Grade B includes a ten percent tolerance for eggs of a quality less than Grade B. Such grading is done prior to packaging and transportation and is intended to be only an indication to the consumer as to what type eggs are contained in any given package.

Furthermore, while the eggs have been washed and sanitized this means only that the egg has passed through a washing and sanitizing solution. It does not mean that all bacteria has been removed by this process, or that the egg is sterilized.

Scientific experiments establish that it is impossible to remove salmonella from the shells of an egg when it is embedded in the pores of that egg.

4. FICTION

Misa claims that Consumer Grade B or better eggs have been candled which allows an inspector to easily detect a rotten egg.

FACT

Again, untrue, for the same reason.

5. FICTION

Misa claims that any bacteria present in the raw egg product rendered by the centrifuge will be destroyed if the user follows the manufacturer's suggestions and cooks the product for 3.5 minutes at 140°F. Misa claims such heat treatment is the equivalent of pasteurization.

FACT

Heating to 140°F for 3.5 minutes by no means guarantees destruction of bacteria, including Salmonella. Destruction of bacteria by heat is not instantaneous, but involves a progression reduction in numbers with time: the more bacteria that are present initially, the more that will be present after heating. This means that heating at 140°F for 3.5 minutes may be grossly inadequate -- particularly when using the centrifuge egg breaker obviously maximizes contamination of the raw product. Furthermore, the internal temperature of the product must reach 140°F for 3.5 minutes in order to accomplish pasteurization. Merely complying with the manufacturer's suggestion does not come close to accomplishing this.

6. FICTION

Misa claims that numerous organizations have approved the centrifuge for use in the breaking of eggs for human consumption and that USDA regulations allow use of the centrifuge in processing plants.

FACT

These claims are false. USDA/AMS and USDA/FSIS have indicated that the centrifuge is sanitarily designed and constructed. Similarly, the Bakery Equipment Sanitation Standards Committee has certified the equipment complies with its basic criteria. However, none of these organizations have approved the practice of using this equipment to break eggs for human consumption.

A letter dated October 11, 1985 and signed by Executive Vice President Tom Gable of the National Sanitation Foundation, concurs with USDA's position that centrifuge egg breaking is unsafe. The EggMaster does not carry the NSF "seal" which approved equipment bears.

7. FICTION

In Floor debate, Congressman Badham indicated that the language prohibiting the centrifuge process would, and I quote, "prohibit any egg use in a public place, inspected by the USDA, unless the insides of the egg are examined before cooking . . . so there go our hard-boiled eggs, our soft-boiled eggs, and our pickled eggs."

FACT

Under the Egg Products Inspection Act, processing of eggs does not include cooking or boiling eggs. Despite letters from USDA pointing this out the manufacturer and his advocates continue to make this allegation.

8. **FICTION**

The centrifuge has been in use for five years in over 700 establishments and has never caused illness or salmonella poisonings. Therefore the centrifuge is "proven" safe for use.

FACT

- We doubt that 700 machines have been in use for five years. It is more likely that most of the machines were sold very recently and have only been in use a year.

- According to the Center for Disease Control only one percent of the actual incidence of Salmonella poisoning are identified and reported each year.

Let me now reiterate what I said to you earlier. USDA knows the use of centrifuge egg breaking is unsafe. USDA prohibits the use of centrifuge egg breaking in egg processing plants. USDA has sporadically supported legislation which would prohibit centrifuge egg breaking in bakeries and restaurants. USDA sought and received overwhelming affirmation from the scientific and food processing communities that such a prohibition was necessary.

It is now incumbent upon the Secretary of Agriculture to exercise the authorities which are his under the law and to fulfill the responsibility which is his under the law by issuing the requisite regulations to prohibit the use of centrifuge egg breaking in all establishments including bakeries and restaurants.

The United Egg Producers have formally petitioned the Department of Agriculture to issue such regulations and have attached to that petition a legal opinion rendered by counsel. Counsel is convinced that the Secretary of Agriculture possesses such authority; that the Secretary of Agriculture has such a responsibility; and that the continued prohibition of centrifuge egg breaking in official USDA inspected plants while hotels, bakeries and restaurants are permitted to use this technology is an inequitable enforcement of existing laws and regulations. We have learned that the American Law Division of the Library of

Congress has issued an opinion which concurs with that of United Egg Producers and their counsel.

The issuance of regulations would not require any additional manpower or expense in order for inspection and enforcement. Local and state health departments currently inspect these facilities on a regular basis and have the authority to enforce regulations issued under the Egg Products Inspection Act. Prohibition of the centrifuge would be enforced in the course of routine inspections at the state and local level.

In conclusion, the United Egg Producers have grown extremely frustrated and very disappointed with the United States Department of Agriculture's response to this situation. Centrifuge egg breaking is unsafe and the Department knows that. One manufacturer's right to stay in business does not supersede the right of the public to be assured that they are consuming unadulterated foods. We hope the Department of Agriculture knows that.

We are here today to ask this Subcommittee to consider the Department of Agriculture's responsibilities and authority under the law and to make recommendations to USDA as appropriate. We hope that you will recommend that the Department immediately take steps to issue the requisite regulations to prohibit the use of centrifuge egg breaking in bakeries and restaurants as they have done in official egg processing plants for 15 years.

Thank you for your time.

Mr. Olin. Thank you very much, Mr. Pope.

We have a vote on the House Floor. I would like to call the hearing in recess here for about 10 minutes while we go over and vote and come back. If you will just bear with us, we will be back in about that length of time.

Mr. Volkmer. Mr. Chairman, may I ask if Mr. Luberski from Hidden Valley Ranch is still here?

Mr. Olin. Is Mr. Luberski from Hidden Valley Ranch still here? Mr. Luberski?

Apparently not.

Mr. Murphy. If I may, Mr. Chairman, he had to catch a plane, not knowing that he would be recalled at this time.

Mr. Olin. OK. We will be in recess for about 10 minutes.

[Recess taken.]

Mr. Olin. The hearing will reconvene.

Before we start, there is one gentleman at the table whom I have not identified, Mr. McLeod. Are you with Mr. Pope?

Mr. McLeod. Yes, I am accompanying Mr. Pope and Mr. Dynes. I am counsel to UEP.

Mr. Olin. Fine. That is perfectly fine.

Would Mr. Dynes like to give his testimony next?

STATEMENT OF CHUCK DYNES, CHAIRMAN, UNITED EGG PRODUCERS, ACCOMPANIED BY MIKE McLEOD, ATTORNEY

Mr. Dynes. Thank you, Mr. Chairman.

Thank you for the opportunity to speak with you today. I commend the subcommittee for conducting these oversight hearings.

I currently serve as chairman of the United Egg Producers, a national federation of regional cooperatives representing over 50 percent of the Nation's egg producers. By trade, I am a farmer, an egg producer. I coown and operate a family farm with my two brothers which my father founded in 1948. We produce a quarter of a million eggs per day for sale either to consumers on the retail market or to the wholesale market or to egg processing plants.

I am accompanied by Mike McLeod who is our attorney for United Egg Producers who has rendered a legal opinion on whether USDA has the right to enforce the regulations.

Contrary to Mr. Maynard's allegations, it is not just egg processors, but egg producers, who are opposed to the use of his machine. I am not a processor. The great majority of the members of United Egg Producers are not processors.

I pay an assessment on my production of eggs in the amount of $0.05 per case which totals approximately $12,740 per year. This assessment is pooled with those of other egg producers and is used to promote a wholesome and positive public image of eggs.

I would be the first to welcome a new invention which would allow bakeries and restaurants to safely break shell eggs instead of relying upon processed eggs for their manufacturing needs. The reason for this is simple. This would create a market for me, and I receive a higher price for eggs sold to bakeries than for those sold to processors.

However, I adamantly oppose the use of centrifuge egg breaking machines in bakeries and restaurants. They are not safe and will result in severe outbreaks of salmonella poisoning. The resulting publicity will focus upon the bad egg which caused the illness, not the equipment. That is not fair to me.

One only has to recall the milk case in Chicago involving 20,000 illnesses or the cheese problem in California. The food product took the heat, not the machinery.

It infuriates me that a product which I work so hard to deliver to the consumer in a clean, wholesome, and safe manner is being irresponsibly processed in a fashion that causes bacterial adulteration of the final product. What is even more infuriating is that the technology which is responsible for such adulteration isn't even a new bad idea. It is an old bad idea. How MiSa Manufacturing has passed this old, unsafe, discredited technology off as a wonderful new invention I do not know. Why the Department of Agriculture has allowed MiSa to sell equipment to bakeries and restaurants which has been prohibited for use in processing plants for 15 years I do not know. Why the USDA ignores a survey of 17 scientists and food hygienists conducted during the first part of October 1985 where all of 15 respondents said centrifuge egg breaking is unsafe is beyond me.

However, as a taxpayer, a consumer, and an egg producer, I believe that I deserve an explanation. If the Department intends to maintain that regulations prohibiting the centrifuge cannot be issued because they would force someone out of business, I must object.

I recall very clearly in 1971, immediately following implementation of the Egg Products Inspection Act, the USDA acted swiftly to shut the doors on almost 800 breaking operations, large and small. One of those put out of business was my mom. She used to break eggs by hand, freeze the product, and sell it to make a little extra money. she couldn't have had more than a handful of customers, but the USDA diligently fulfilled their responsibilities, and after having determined that such a practice was unsafe, they shut her down.

Now there are thousands of bakeries and restaurants using equipment USDA knows is unsafe and they are doing nothing about it.

Consumers, taxpayers, and egg producers deserve more responsible action than this. My product is being improperly processed and adulterated, and the public health is being endangered. I urge this subcommittee to require some sort of explanation from USDA and to recommend USDA establish regulations prohibiting the use of centrifuge egg breaking machines. They have done it before, and now they must do it again.

I would also like to take a minute to comment on Mr. Luberski's from Hidden Valley remark that he has never seen a rotten egg or whatever in B grade or better eggs going into these restaurants. It is a matter of record that when the four bakeries were inspected in California, when they broke the grade out, .25 percent of the eggs were inedible or with a mixed rot, and that is a matter of record submitted. Thank you.

[The prepared statement of Mr. Dynes follows:]

Presented by
Chuck Dynes
Chairman
United Egg Producers

TESTIMONY

Mr. Chairman, Members of the Subcommittee, I thank you for the opportunity to speak with you today and commend the Subcommittee for conducting these Oversight Hearings.

I currently serve as Chairman of the United Egg Producers -- a national federation of regional cooperatives representing over fifty percent of the nation's egg producers. By trade I am a farmer -- an egg producer. I co-own and operate a family farm, which my father founded in 1948, with my two brothers. We produce 250,000 eggs per day for sale either to consumers on the retail market, or to egg processing plants, on the wholesale market.

Contrary to Mr. Maynard's allegations, it is not just egg processors but egg producers, who are opposed to the use of his machine. I am not a processor. The great majority of the members of United Egg Producers are not processors.

I pay an assessment on my production of eggs in the amount of $.05 per case which totals approximately $12,740.00 per year.

This assessment is pooled with those of other egg producers and is used to promote a wholesome and positive public image of eggs.

I would be the first to welcome a new invention which would allow bakeries and restaurants to safely break shell eggs instead of relying upon processed eggs for their manufacturing needs. The reason for this is simple. This would create a market for me. I receive a higher price for eggs sold to bakeries than for those sold to processors.

However, I adamantly oppose the use of centrifuge egg breaking machines in bakeries and restaurants. They are not safe and will result in severe outbreaks of salmonella poisoning. The resulting publicity will focus upon the "bad egg" which caused the illness, not on the equipment. That's not fair.

It infuriates me that a product which I work so hard to deliver to the consumer in a clean, wholesome and safe manner is being irresponsibly processed in a fashion that causes bacterial adulteration of the final product. What is even more infuriating is that the technology which is responsible for such adulteration isn't even a new bad idea. It's an old, bad idea. How Misa Manufacturing has passed this old, unsafe, discredited technology off as a wonderful new invention I do not know. Why the Department of Agriculture has allowed Misa to sell equipment to bakeries and restaurants which has been prohibited for use in processing plants for 15 years, I do not know.

However, as a taxpayer, a consumer, and an egg producer I believe that I deserve an explanation. If the Department intends to maintain that regulations prohibiting the centrifuge cannot be issued because they would force someone out of business, I must object. I recall very clearly in 1971, immediately following implementation of the Egg Products Inspection Act, USDA acted swiftly to shut the doors on almost 800 egg breaking operations -- large and small. One of those put out of business was my mother. She used to break eggs by hand, freeze the product, and sell it to make a little extra money. She couldn't have had more than a handful of customers but USDA diligently fulfilled their responsibilities and after having determined such a practice was unsafe -- they shut her down.

Now there are thousands of bakeries and restaurants using equipment USDA knows is unsafe and they are doing nothing about it.

Consumers, taxpayers and egg producers deserve more responsible action than this. My product is being improperly processed and adulterated and the public's health is being endangered. I urge this Subcommittee to require some sort of an explanation from USDA and to recommend USDA establish regulations prohibiting the use of the centrifuge egg breaking machine. They have done it before and now must do it again.

Mr. OLIN. Thank you, Mr. Dynes.

We will hold questions until all of you have spoken.

Mr. Eckhoff, would you like to go next?

Mr. ECKHOFF. Yes, thank you, Mr. Chairman.

STATEMENT OF GILBERT ECKHOFF, VICE PRESIDENT, OPERATIONS, HENNINGSEN FOODS, INC.

Mr. ECKHOFF. My name is Gilbert Eckhoff. I am vice president for operations of Henningsen Foods, Inc., a privately owned company in the egg production and egg processing. We have been in existence for almost 100 years.

There is no question that the egg breaking and products industry has improved throughout the years as a result of the Egg Products Inspection Act when it was put into effect. The eggs product plants in the United States come under USDA continuous inspection, and they set forth minimum standards which we all have to meet. For these reasons, the USDA prohibits the use of a centrifuge egg breaking machine in official inspected processing plants.

USDA knows this practice is unsafe and industry agrees. Henningsen Foods also markets a line of equipment including a centrifuge. This equipment is marketed to other egg product plants and is used to extract the final liquid from shells after they have been broken on normal machines, and that liquid then is used in pet food.

While egg processors are prohibited from using this technology, bakeries and restaurants are purchasing the equipment and using the equipment to break eggs. Aside from the fact that such a practice is unequivocably unsafe, it is highly inequitable. If centrifuge egg breaking is safe, why should the egg processing industry be denied the economics of centrifuge egg breaking while bakeries and restaurants are permitted its use? It is clear there are two sets of standards and that it is inequitable enforcement of the law.

We think the USDA must render a decision. Is centrifuge egg breaking safe or isn't it? If it is safe, then the egg processing industry for 15 years has unjustly suffered the ineconomies of alternative egg breaking practices as a result of unnecessary regulation.

If centrifuge egg breaking is unsafe, then it should be prohibited everywhere. As a responsible member of the egg processing industry and a representative of Henningsen Foods, we strongly urge the practice be prohibited.

This is not the first time that Henningsen Foods has appeared before Congress urging the enactment of laws or the implementation of regulations which would assure the public that eggs were being processed in a safe and sanitary fashion. Mr. Victor Henningsen, president, appeared before this very subcommittee on December 3, 1970, to urge enactment of the Egg Products Inspection Act.

I won't take you through a typical egg breaking operation since we went through that this morning. I do, however, have photographs which show how eggs are individually inspected, candled, and washed which I would like to submit to the committee, if I may.

Mr. OLIN. Certainly, if you will include that with your testimony.

Mr. **Eckhoff**. Thank you. I would like to make a point however. In the process, the eggs are washed and sanitized. Before an egg enters the breaking room, it is certainly grade B or equivalent in cleanliness and wholesomeness. In fact, a lot of the eggs broken by a processing plant are probably superior to most lots of consumer B grade eggs sold on the retail market.

As we have watched this issue be bantered back and forth from USDA to FDA and back to USDA and then finally debated on the floor of the U.S. House of Representatives, I have frankly been shocked to see the entire issue so misrepresented. This is not new technology. As we have been told, it is almost 100 years old. As I told you before, we do market the machine. If we thought this technology was safe for use in production of human food, frankly, we would be marketing it ourselves in the same manner. We know the use of the centrifuge for the production of human food is extremely dangerous to the consumer. We are shocked that the U.S. Department of Agriculture would allow such a practice to proliferate and take no steps to prohibit the practice which has been known to be unsafe for decades and which it has prohibited in egg processing plants for over 15 years.

I think that with all that has happened, it is only going to be a matter of time before an egg processing plant will insist that if a bakery or restaurant of hotel can break eggs in a centrifuge machine, then they should be allowed to do so also. After all, it takes one person to operate a centrifuge versus three to four and sometimes five persons on an egg breaking machine. Also, a centrifuge machine can be purchased for a fraction of the cost of an approved egg breaking machine. You are talking about $300 to $8,000, depending on what the price of this machine versus ours is, to $125,000 for a system of egg breaking machines.

The economic advantages of the centrifuge are clear and indisputable. There is no question about that.

The inequity in the current regulation of the egg breaking practices in processing plants as opposed to bakeries, restaurants, and so forth must be resolved one way or the other. We urge this subcommittee to recommend that the Department of Agriculture make a decision, to exercise their existing authority under the law, and to prohibit the use of centrifuge egg breaking equipment in all establishments. If the Department declines to do so, I would suggest regulations be lifted from egg processing plants as they are unnecessary.

Thank you for your time.

[The prepared statement of Mr. Eckhoff follows:]

Presented by
Gilbert B. Eckhoff
Vice President for Operations
Henningson Foods, Inc.

TESTIMONY BEFORE THE SUBCOMMITTEE ON LIVESTOCK, DAIRY AND POULTRY ON THE USE OF CENTRIFUGE PROCESSING OF EGGS

My name is Gilbert Eckhoff. I'm Vice President of Operations for Henningsen Foods, Inc. Henningsen Foods is a privately owned company involved in the egg production and egg processing and has been in existence for almost a hundred years.

There has been no question that the egg breaking and egg products industry has steadily improved throughout the years. On July 1, 1971, the Egg Products Inspection Act was put into effect. This act required that all products plants in the United States come under continuous inspection by the U.S. Department of Agriculture which set forth certain minimum standards that these plants must meet. Among these standards are regulations that eggs be broken for a fashion which does not allow for, or minimizes the contact between, the egg shell and the egg interior; that eggs be broken in a fashion which allows for the inspection by sight and smell of the interior of each individual egg being broken; and that eggs be broken in a fashion which keeps each egg separate from the larger batch until it is so inspected. For these reasons USDA prohibits the use of centrifuge egg breaking machines in official inspected egg processing plants.

USDA knows this practice is unsafe and industry agrees. Henningsen Foods manufacturers and uses a centrifuge machine. However, the equipment is properly and legally used only to extract liquid from egg shells which have already been safely broken in the production of human food and would otherwise be discarded. The extracted liquid is then used for pet food, or the manufacture of other inedible product. The centrifuge is not used to break any eggs in a USDA inspected processing plant. The centrifuge liquid extractor allows the industry to reduce waste and is an extremely cost effective method of extracting liquid from egg shells. Despite the economics, the centrifuge should not and may not be used to break eggs or to render a product for human consumption.

At least, this is true in egg processing plants. It seems, however, that Henningsen Foods is not the only company manufacturing a centrifuge. Misa Manufacturing, a California-based company, has slightly adapted the equipment and aggressively marketed centrifuge egg breaking machines to bakeries, restaurants and other establishments across the country. So, while egg processing plants are prohibited from using this technology, bakeries and restaurants are purchasing and using the equipment, to break eggs!

Aside from the fact that such a practice is unequivocably unsafe, this situation is highly inequitable. Or if centrifuge egg breaking is safe, why should the egg processing industry be denied the economics of centrifuge egg breaking while bakeries, restaurants, etc. are permitted its use? It is clear that there are two sets of standards and that is inequitable enforcement of the law.

USDA must render a decision. Is centrifuge egg breaking safe, or isn't it? If it is safe, then the egg processing industry for 15 years has unjustly suffered the ineconomies of alternative egg breaking practices as a result of unnecessary regulation.

If centrifuge egg breaking is unsafe, then it should be prohibited, everywhere. As a responsible member of the egg processing industry and a representative of Henningsen Foods, we strongly urge the practice be prohibited. It is a real threat to public health.

This is not the first time Henningsen Foods has appeared before Congress urging the enactment of laws or the implementation of regulations which would assure the public that eggs were being processed in a safe and sanitary fashion. Mr. Victor Henningsen appeared before this very Subcommittee on December 3, 1970 to urge enactment of the Egg Products Inspection Act. I think, in order to put this "centrifuge issue" in context, it is important to understand the dire circumstances which necessitated this legislation and the subsequent stringent and necessary regulation of egg breaking practices.

What led to the implementation of EPIA were severe outbreaks of reported cases of food poisoning, primarily caused by salmonella traceable to eggs in egg products. In addition, the Food and Drug Administration was finding a high incidence of salmonella in egg products. This led the FDA, in the late 1960's, to mandate that all egg products must be pasteurized or heat treated in such a way to render them salmonella negative.

USDA also issued regulations setting forth minimum requirements for plants under the voluntary egg products inspection program. These requirements and guidelines were, following the passage of the Egg Products Inspection Act, refined and strengthened and culminated in USDA regulations set forth in "Regulations Governing the Inspection of Eggs and Egg Products", USDA, 7 CFR, Part 59. All egg products processing plants must operate in compliance with these regulations and under the continuous inspection of the United States Department of Agriculture. These regulations cover areas such as sanitary construction of facilities and equipment, the minimum requirements for breaking and processing of eggs, pasteurization conditions for every kind of egg product, and most importantly, the sampling and testing of each batch of egg product for salmonella bacteria.

To take you quickly through a typical breaking operation, the eggs are loaded onto conveyors from the filler flat by an automatic loader, and then the conveyor goes through an egg washer where they are scrubbed by brushes and at the same time flushed with the washer solution containing a cleaning compound. They are then rinsed and sanitized with either a chlorine or iodine solution. The eggs then move through a candling and inspection area. Here, an inspector looks at all the washed shell eggs and removes any shells which are not properly cleaned or are leakers or eggs having other obvious defects. Then, and only then, may the eggs enter the breaking room.

It is because egg processing plants wash, sanitize, candle and inspect each egg prior to breaking within the plant, that we are permitted to purchase from producers shell eggs which would not at the time of purchase meet consumer Grade B levels. However, by the time an egg processing plant breaks an egg it is most certainly Grade B or equivalent in cleanliness and wholesomeness. In fact, the eggs broken by a processing plant are probably superior to most lots of consumer Grade B eggs sold on the retail market. But of course, until the introduction of the Egg Master, these eggs were hand broken -- meaning of course the shell was kept separate from the interior as a matter of practice and the consumer had the opportunity to provide a final checkpoint to inspect the interior of each egg for wholesomeness. This is required of egg processing plants, as well.

The eggs then enter the breaking room and go on to a breaking machine which operates at speeds of 16 - 24,000 eggs per hour. Each machine has an inspector who has the ability to inspect each individual egg being broken. If a bad egg is found the machine is shut down, the separating cup removed, and the cracker which broke the egg removed for cleaning. That way there is no possibility of contaminating the next egg broken or contaminating the larger batch of eggs. The egg machines used today are all stainless steel and sanitary construction and the only limitation on speed is the ability of the operator to inspect, detect and remove individual defective eggs.

The eggs are then immediately cooled to maintain quality and then pasteurized at temperatures of 148°F before being processed into finished product -- whether it be dried product and/or frozen. After the eggs are processed into the finished product they are then very stringently tested for salmonella, plate count, yeast and mold and other types of bacterial tests to be assured that when they are then consumed into another product which is sold to the public they are absolutely safe. Despite all the precautions which are taken in washing, inspection, breaking, cooling and pasteurizing, the eggs are tested for the presence of bacteria before they are sold to the public. None of these precautions are taken by users of the centrifuge machine.

Whether or not such precautions are necessary and advisable is the question before this Subcommittee today. I would like, however, to point out that since the exercise of such precautions became mandatory in 1971 the incidents of salmonella associated with egg products is virtually unheard of. The solution to an existing problem was the passage of law the implementation of regulations which require that proper sanitation and egg handling practices be maintained by all those breaking large quantities of eggs for use in the preparation of human foods. That is the solution today as well. To not enforce the rules which currently exist and to allow the centrifuge egg breaking machine to be used when it does not follow the guidelines of existing regulations is in our opinion a giant step backward and can do nothing but endanger the consumer and set the industry back 50 years.

As you know, the egg processing industry, as well as the egg producers, have taken an interest in the centrifuge issue. As we have watched the issue be bantered about from USDA to FDA, back to USDA and finally debated on the floor of the House of Representatives, I have frankly been shocked to see the entire issue so misrepresented. Misa Manufacturing did not invent this technology. This is not a new way to break eggs. The technology has been available for 100 years. As I said, Henningsen Food manufacturers and utilizes the centrifuge machine for the purpose of extracting liquid from egg shells for use in pet food or other inedible products. If we thought this technology was safe for use in the production of human food, frankly, we would manufacture and market it ourselves. Misa Manufacturing then would no longer have a monopoly on the centrifuge egg breaking market in bakeries, restaurants and similar establishments. But we know the use of the centrifuge for the production of human food is extremely dangerous to the consumer. We are shocked that the United States Department of Agriculture would allow such a practice to proliferate and take no steps to prohibit the practice which it has known to be unsafe for decades and which it has prohibited in egg processing plants for over 15 years.

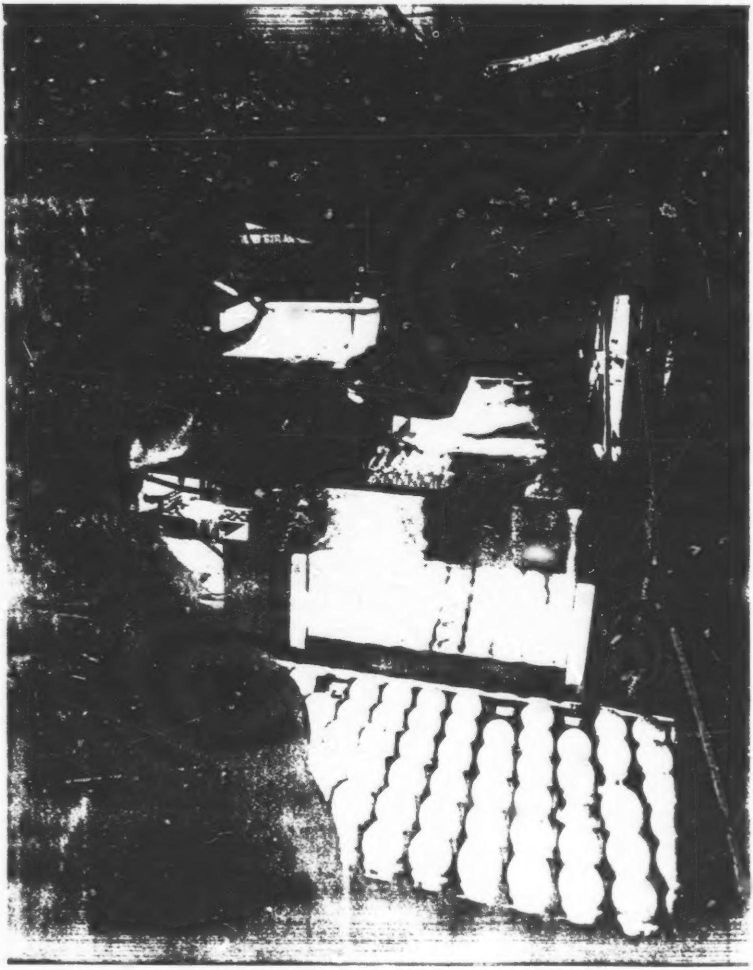
Finally, I would like to conclude with a word to the wise. While all administrative and legislative efforts made to date by the egg producing and egg processing industries have been to encourage the prohibition of [illegible]rifuge egg breaking in all establishments, it is only a matter of time before an egg processing plant will insist that if a bakery or a restaurant or a hotel can break eggs in a centrifuge machine, then they too should be allowed to do so. After all, it takes only one person to operate a centrifuge machine versus three to four persons on an egg breaking system. Also a centrifuge machine can be purchased for a fraction of the cost of an approved egg breaking machine. Furthermore, the centrifuge does extract more liquid from the eggs so crushed than do the egg breaking machines currently in use. The economic advantages of the centrifuge machine are clear and indisputable. So too are the grave health hazards associated with its use. The inequity in current regulation of the egg breaking practices in processing plants as opposed to bakeries, restaurants, etc. must be resolved -- one way or another. We urge this Subcommittee to recommend that the Department of Agriculture make a decision -- which they are apparently incapable of making themselves -- to exercise their existing authority under the law and to prohibit the use of centrifuge egg breaking in all establishments. If the Department then declines to do so, I would assume such regulations would be lifted from egg processing plants as they are unnecessary.

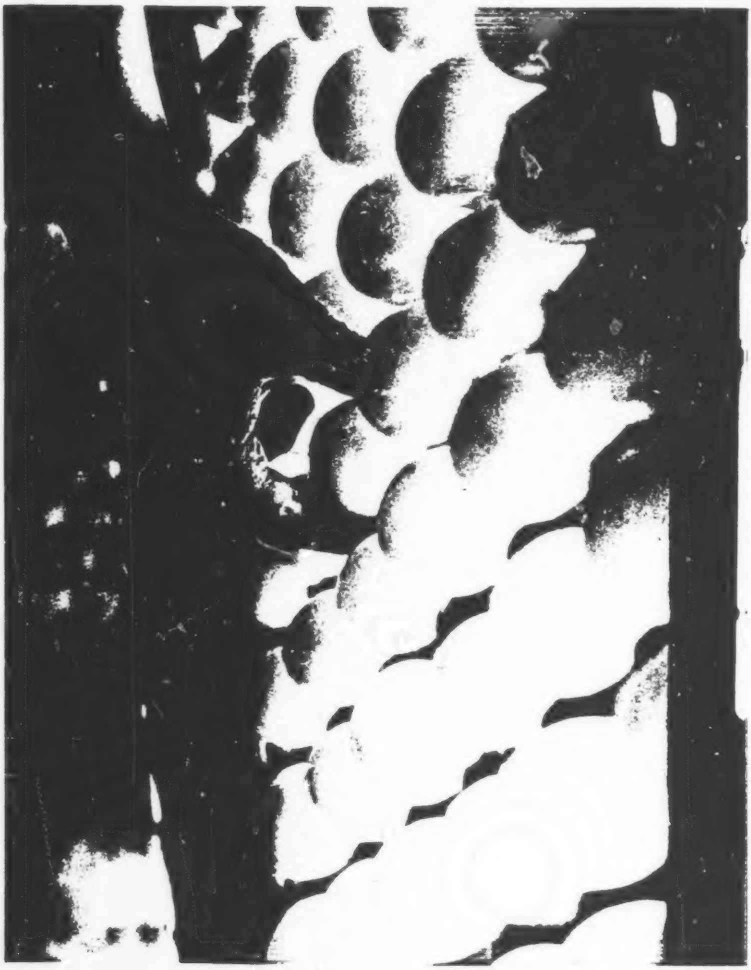
In conclusion, we would like to submit for the record a copy of the EA and E3A Sanitary Standards which were established to define the criteria for cleanability and dairy processing and egg processing equipment respectively. These standards are formulated by the cooperative effort of the industry and regulatory groups including the Dairy Industry Committee, the International Association of Milk and Food, Environmental Sanitarians, the U.S. Public Health Service, and the U.S. Department of Agriculture, Dairy and Food Industry Supply Association, and Poultry and Egg Institute of America. The EA and E3A Standards and Practices are published by General Food Protection and it is our opinion that all equipment that is used in the processing of eggs and egg products should meet these standards. The centrifuge egg breaking machine does not meet these standards. I do not know of a single credible organization which would approve the centrifuge for use as an egg breaker.

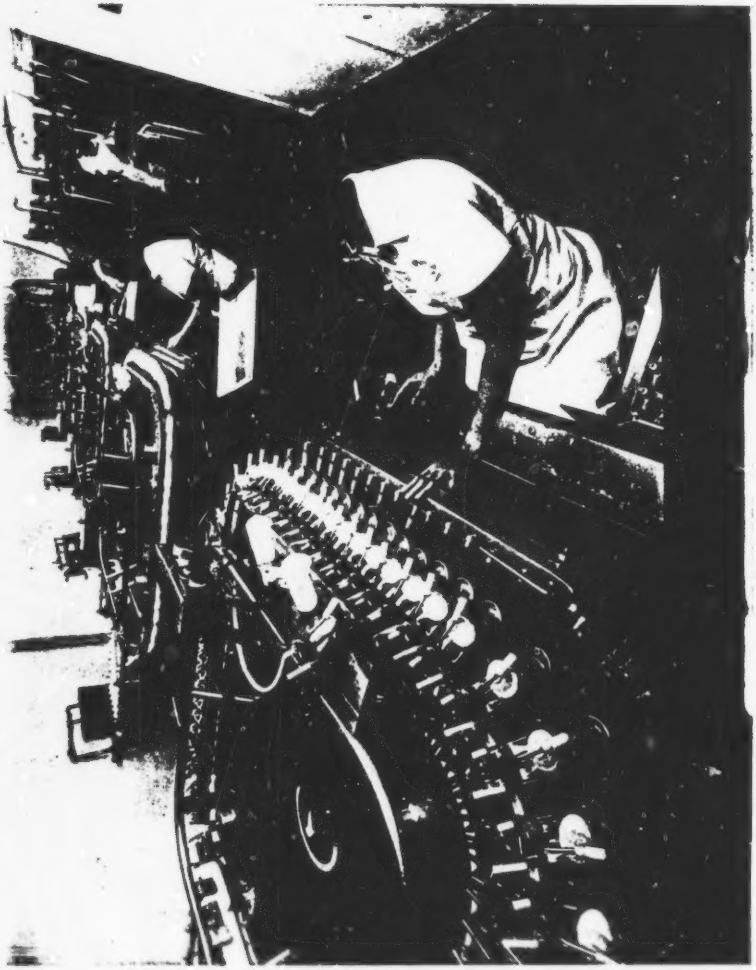
Furthermore, USDA has recently conducted a survey of 17 food scientists and food industry experts in order to solicit their opinions with regard to the safety of the use of the centrifuge machine as an egg breaker. Of the 15 respondents, all but FDA agreed that there are very serious problems associated with the use of the centrifuge machine as an egg breaker; none endorsed the use of the centrifuge machine as an egg breaker; and none dissented from USDA's stated position that the centrifuge for use as an egg breaker in bakeries, restaurants, similar establishments should be prohibited. We cannot help but wonder why, given the Department of Agriculture's own position with regard to this issue, and the overwhelming support and concurrence which can be found in the food industry and the scientific community, why the Department of Agriculture does not act immediately to exercise their authorities under the law, fulfill their responsibilities under the law, and prohibit the use of the centrifuge egg breaking machine in all establishments. I hope that this Subcommittee will ask the Department of Agriculture that question and make a recommendation that the Department do precisely that.

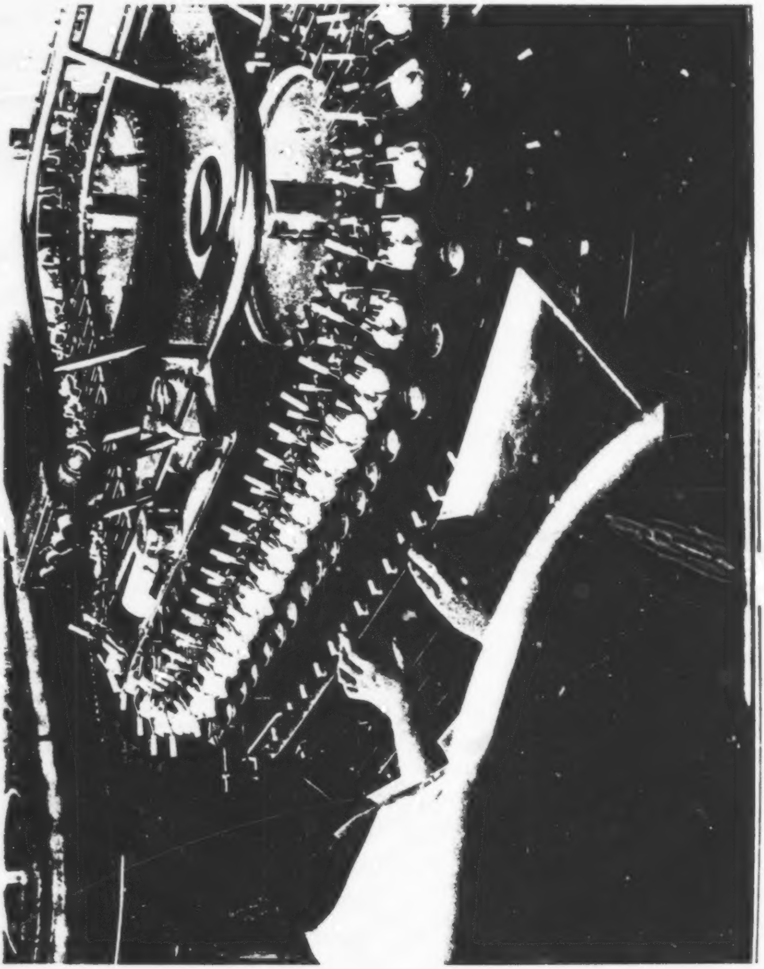
Thank you for your time.

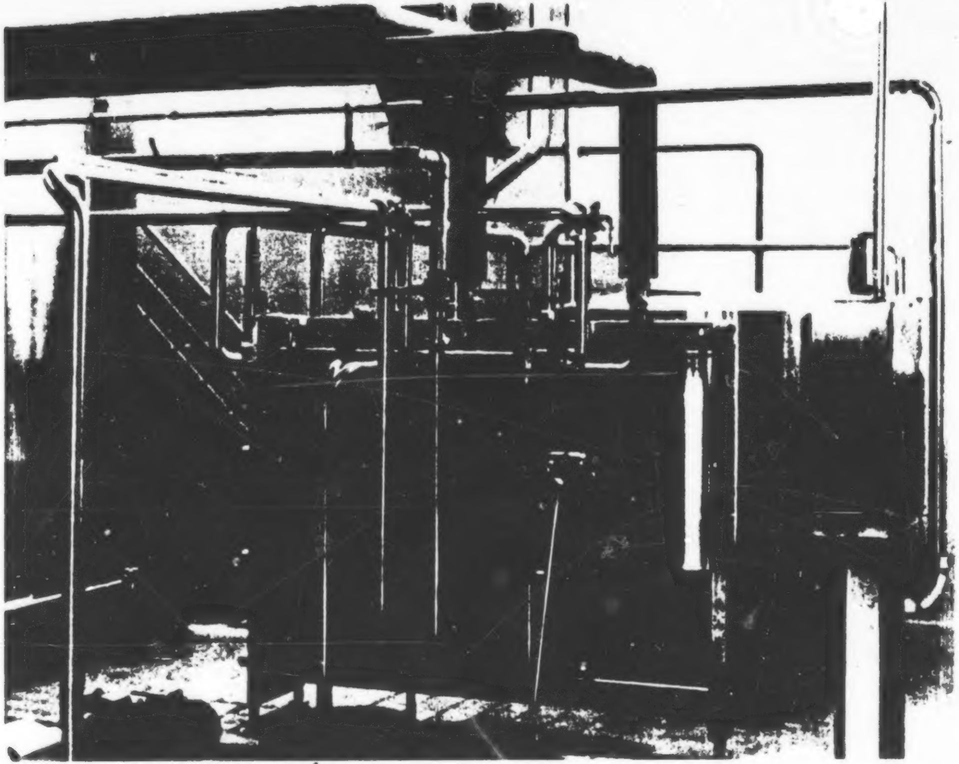
(Photographs follow:)











Mr. Olin. Thank you, Mr. Eckhoff.

I might say that our panel here has shrunk to one member, as you can see. Let me say to those of you who were here this morning and heard the rather lengthy discussion we had with the earlier witnesses, it is very clear, I think, that the subcommittee is going to try to treat this subject in a nonpolitical way. We will look for some kind of a scientific or factual way to solve the problem rather than taking a vote largely on a political basis as to who has which constituents.

It is also, I think, pretty clear that we will find a way of making one Government agency or putting a Government agency, USDA or FDA, in a position of making a ruling on the machine process. I say that consciously because it is more than just the machine. It is the total process that we are talking about—and eliminate the gap that exists at the present time. I think that is pretty clear. Exactly what the committee will do, it is hard to say, but I believe that this question of lack of jurisdiction which appears to exist and the inequity which appears to exist also needs to be rectified. I am quite sure that the committee will try to do that.

I really do not have additional questions for this panel. I think we have covered most of the items that we might ask about. Prior to going over to vote, I would say that if there is anything else you would like to say, you may do so.

Mr. Pope. Thank you, Mr. Chairman.

One thing I think is important has been brought up earlier, and that is whether the groups involved will be willing to go to a scientific panel or that type thing in testing the equipment and so on and so forth. The industry would have absolutely no problem with a credible food scientific panel looking at this process to see whether it is healthy, provides the kind of protection to the consumer. We would have no problem with that, because we know what the outcome would be.

Mr. Olin. I appreciate that remark. The issue here basically is, is there a public health danger?

Mr. Pope. That is right.

Mr. Olin. There are some economic issues that are of injustice, but the basic issue is, is the public being protected by the present scheme or is it not? I think we will try to find out—try to get a scientific basis for that rather than just people's general reaction to how dirty they think an egg shell is which you can't tell just by thinking about it. It needs to be measured.

Is there anything else, Mr. McLeod? I am going to have to leave here very shortly.

Mr. McLeod. Just one point. We researched the question of who has legal authority, and the United Egg Producers submitted a petition on November 12 to the Department asking them to exercise their authority and telling them why we thought they had it. Subsequently, you received here in the committee an opinion from the American Law Division of the Library of Congress which concurs fully in our position as to who has authority.

We would appreciate it if the committee could ask the USDA to provide us a detailed justification of why they—an explanation of the law as to why they do not have authority.

Mr. OLIN. I don't think this should be something the committee would ask the Department to supply you. We will be asking for that ourselves, and I think it will be a matter of public record after we obtain that information. That would be probably a better channel.

Mr. McLEOD. Right.

Mr. OLIN. Thank you very much, gentlemen.

If the next panel would stand by, I am going to go over and vote and come back. It should take again no more than 10 or 15 minutes. This panel is free to go. Thank you.

[Recess taken.]

Mr. OLIN. I will call the hearing to order again.

We have on the panel Mr. William Stadelman, professor emeritus at Purdue University, West Lafayette, IN; and Mr. Michael Liewen, assistant professor at the University of Nebraska, Lincoln, NE. Gentlemen, I am glad to have you with us. If you would proceed now, we would ask Dr. Stadelman to go first and try to confine your spoken remarks to 5 minutes. Your whole testimony, of course, will be put in the record.

STATEMENT OF WILLIAM STADELMAN, PROFESSOR EMERITUS, DEPARTMENT OF FOOD SCIENCE, PURDUE UNIVERSITY

Dr. STADELMAN. Thank you, Mr. Chairman.

You realize that for a professor of 35 years, that is very difficult. We are tuned to a 50-minute presentation.

Mr. OLIN. Well, I have a lot of confidence in you.

Dr. STADELMAN. The equipment proposed is well designed, but the restrictions on its use as proposed by the manufacturers leave much for concern in order to get a safe food supply to the American public.

The first restriction was that only USDA sanitized grade B or better eggs be used. There is no definition in the regulations anyplace of a USDA sanitized egg. What is more, there is no requirement that eggs be sanitized to be grade AA, A, or B under USDA regulations. So, you may get nest clean eggs that have never been sanitized, and those that have been sanitized, the normal sanitizing is a 20-part-per-million active chlorine which is effective but only to a very limited extent.

The centrifuge breaker is an attempt to reduce costs and it has been reported by several of the preceding witnesses that it will reduce the cost of producing a liquid egg product. What concerns me is that the people who are interested in using it are very cost conscious. Therefore, they are also going to be looking for the lowest cost egg they can get. This will not be a grade AA or a grade A but undoubtedly a grade B egg.

Grade B eggs can have 90 percent of the eggs stained. The other 10 percent can be cracks. Now, they specified that they should examine the eggs to see whether they are cracked or not. You can detect an impact crack which is a nice star shape, but the only way hairline cracks can be detected is by individually handling the eggs or passing them over a mask handler. So, you will get some of the cracks. Even in grade A and AA, you are allowed to have a percentage of cracked eggs at the point of delivery.

There will be eggs cracked so that any dirt on the shell could be picked—I mean on the filler flat—could be picked up onto the shell and then when the egg is brought into the kitchen, normally from a cool place, the egg will sweat. Moisture will condense on the shell. The moisture on the shell, in evaporation, will tend to cool the contents which shrinks the contents. You will get a reduced vacuum and suck whatever bacteria on the shell through that crack into the shell. Granted, this may only be on 2 percent of the eggs, but 2 percent of the eggs are enough to contaminate the entire batch.

As demonstrated by Mr. Maynard on the use of the machine, he said the commingling was minimal. This is true for the first flat of eggs he throws in. The second flat has to be forced through the shell which is already there, because when that centrifuge is spinning at about 3,500 rpm, the shell is going to remain on the sides. When he stops the machine, it will fall to the bottom. By the time he has got to the 12th flat, which is the number of flats of eggs in a 30-dozen case, the last flat is going to be forced through all of the shells. The liquid there will be forced through all of the shells.

So, there is plenty of washing of bacteria from the shell surface and from the shell membranes which very effectively keep bacteria from entering the liquid content of the egg as handled as a shell egg.

One other point I would like to make this morning. When Representative Badham was testifying, he suggested that of the 15 respondents to the USDA, none of the respondents had used or seen the machine. I first saw a centrifuge in use in 1970. It was being used in Holland in a pet food plant. I again saw the particular machine in question here on display at the National Restaurant Show in Chicago in May of this year.

At that time, there was a big sign up over the machine saying USDA approved. This was for the restauranteurs whom, I would imagine, the same as I assumed that this had been approved by the proper divisions of the USDA.

Another point was made by Mr. Gable that the nutritional value of the eggs changes considerably. There is very little change in nutritional value of the egg except on drying. It may be possible that you lose a little of the vitamin B1 or thiamine.

The centrifuge breakers, as now used, cause me to be considerably concerned about a major food poisoning outbreak which the egg industry could not stand. As demonstrated to us today, they are supposed to look at both the top and bottom of the egg, turning the eggs over on the plastic mold. On their brochure, it shows the person breaking the egg directly out of a pulp flat. That pulp flat is going to be a highly contaminated product, even new pulp flats, as reported by Ron Ward and others from Iowa State a number of years ago. Packaging material is a good source of contamination, and people are not using the equipment, and there is no way that I can see that it could be properly supervised to use either the proper grade of egg or proper use of the equipment.

Thank you.

[The prepared statement of Dr. Stadelman follows:]

TESTIMONY OF DR. WILLIAM J. STADELMAN

PROFESSOR EMERITUS

DEPARTMENT OF FOOD SCIENCE

PURDUE UNIVERSITY

WEST LAFAYETTE, INDIANA

The equipment proposed is well designed. There are, however, points of concern to me as a person interested in the safety of food available to the American public.

Some of the precautions listed for using the centrifuge need clafrification.

a. As far as I know there is no definition of a USDA sanitized egg. I know that all shielded eggs must be washed and sanitized, but such eggs are not defined as sanitized. Further, shell surfaces become recontaminated by dust, handling, and packing materials as reported by Board _et al._, in Poultry Science 43:584 (1964).

b. The second point in the precautions that needs clarification states, "use liquid egg mixture only in products to be cooked or baked for at least 3.5 minutes at temperatures of 140°F or higher." We recognize the time and temperature for pasteurization. However, placing a deep dish custard or quiche in a 140°F temperature for 3.5 minutes will have little effect on any part of the product other than surfaces. During pasteurization all of the product must be heated to 140°F for at least 1.75 minutes.

c. The centrifuge breaker is an attempt to reduce costs of producing liquid whole egg. Cost cutting users will be equally concerned with getting lowest cost possible eggs. The Egg Products Inspection Act specifically states that eggs used by restaurants, institutions, commissaries, and bakeries may be U.S. Consumer Grade B or better shell eggs. My concern lies in the area of enforcement of this provision in all these types of establishments in the U.S. The concern is directed at the economic advantage of using restricted eggs, that is checks, dirties, leakers, and large blood spots in this equipment.

Another of concern is stained eggs permitted in Grade AA, A, and B quality so stated in the U.S. Department of Agriculture's Quality Standards for shell eggs, Title 7 Chapter 1 Subchapter C Part 56. The standards for Grade B allow for eggs with moderately stained areas if they do not cover more than 1/32 of the shell surface if localized and 1/16 of the shell surface, if scattered to be classified as Grade B. Grade B quality eggs may contain 90 percent of these types of eggs, with the remaining 10 percent checks or 100% small blood spots with diameter of less than 1/8 inch. Even with sanitizing during the plant grading operation, stains frequently harbor more bacteria than clean eggs as reported by F.T. Rosser, Canadian Journal of Research, 20D:291-296, (1942). The bacterial count of liquid from stained eggs broken in a centrifuge would likely be too high to get a wholesome, safe product, even with adequate pasteurization.

d. Finally, as the centrifuge breakers are now used, regulating the types of egg used in the centrifuge is nearly impossible allowing for the possibility of a major food poisoning outbreak.

Respectfully submitted,

William J. Stadelman

William J. Stadelman
Professor Emeritus

(Attachments follow:)

THE MICROBIOLOGICAL CONTAMINATION OF EGG SHELLS AND EGG PACKING MATERIALS

BY

R. G. BOARD, J. C. AYRES, A. A. KRAFT AND R. H. FORSYTHE

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May, 1964

The Microbiological Contamination of Egg Shells and Egg Packing Materials[1,2]

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(Received for publication October 11, 1963)

THE microbiology of egg shells and egg packing materials has received inadequate attention. In England, Haines (1938) found levels of bacterial contamination ranging from $1.30 \times 10^4 - 8.0 \times 10^6$ (incubation, 20°C.) and $3.5 \times 10^4 - 1.6 \times 10^6$ (incubation, 37°C.) on the shells of 130 eggs, the majority of which were procured from a farm. Rosser (1942) reported average counts of 7.0×10^4 organisms per shell of Canadian market eggs and 1.03×10^5 per shell of eggs obtained from a farm. Forsythe *et al.* (1953) found an average of 6.3×10^4 (range, $1.0 \times 10^4 - 1.0 \times 10^6$) microorganisms on the shells of eggs produced on an experimental poultry farm. Haines (1938) examined 100 isolates from shells and found that gram-negative bacteria (38%), bacilli (30%), and gram-positive cocci (25%) were the most prevalent contaminants. He concluded that eggs were exposed to contamination from a wide variety of sources, the chief ones being feces, manure, and soil.

The present study was undertaken with the object of ascertaining the range of microbial contamination on egg shells and egg packing materials received at an egg grading station. Attention was given also to the possibility of contamination of the shells with organisms present on fillers and flats. In addition, a large number of isolates were characterized. It was anticipated that this information would indicate the major source of contamination to which eggs are exposed.

METHODS

An egg collecting and grading plant in Central Iowa was visited at two week intervals August, 1962–January, 1963 inclusive. Used fillers and flats were taken from the unloading benches after having been passed as suitable for reissue to the egg producer. Some of these materials were soiled with dried albumen or yolk material and others with dust. New fillers and flats were taken from a stock maintained in the unloading area. Each of the samples was placed in a sterile envelope for transit to the laboratory. Cotton swabs moistened with 0.1% peptone water were rubbed over an area of 10 cm.^{2} on the interior surface of the bottom of egg cases that were awaiting delivery to the farm. The swabs were submerged in 9 ml. of peptone water during transit to the laboratory. Grade A (clean), B (lightly soiled), and C (heavily soiled, cracks or checks) eggs were collected from each of the six candling stations and were placed in new 1-dozen egg cartons by the candlers. Some eggs were examined immediately on return to the laboratory and others after storage for 1 week in a refrigerated (10°C.) display cabinet. In

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[1] Journal Paper No. J-4675 of the Iowa Agricultural and Home Economics Experiment Station, Ames, Iowa. Project No. 1544; Center for Agricultural Economic Development cooperating.

[2] This investigation was supported in part by Grant-in-Aid funds supplied by Cliff D. Carpenter Associates, Corona Del Mar, California.

[3] Present address: Department of Bacteriology, School of Agriculture, West Mains Road, Edinburgh 9, Scotland.

addition, clean eggs were held at 37°C. for 6 hours and then immersed for 5 minutes in cold (10°C.) sterile distilled water. The eggs were frequently candled during subsequent storage at 10°C. and their contents tested for sterility at the end of the storage period. It was anticipated that this method would result in the selection of organisms that were capable of growing in the contents of eggs stored at 10°C.

In the laboratory, the egg contents were removed aseptically, and the shell, shell membranes and 100 ml. of diluent (0.1% peptone water) were blended at low speed in an "Osterizer"[4] for 1 minute. Similarly, either $\frac{1}{2}$ flat or $\frac{3}{5}$ filler and 600 ml. of peptone water were homogenized in an "Osterizer." Serial decimal dilutions were prepared from the homogenates, and 1 ml. of appropriate dilutions was added to 10 ml. of the following: violet red bile agar, the medium of Barnes (1956) modified with beef extract in place of Lab Lemco, lactose broth, and tryptone glucose extract (TGE) agar. Unless otherwise stated, Difco products were used in this study.

The occurrence on violet red bile agar of purplish-red colonies surrounded by a reddish precipitate, was taken as presumptive evidence of the presence of coliform organisms. Similarly, the small chromogenic colonies which developed on the medium of Barnes (1956) during 48 hours incubation at 37°C. were assumed to be streptococci of fecal origin. After incubation at 37°C. for 18 hours, 0.1 ml. of lactose broth was transferred to 10 ml. selenite crystine broth. The latter was incubated at 37°C. for 18 hours, and a loopful was streaked on brilliant green agar (B.B.L.) and bismuth sulfite agar. Colonies exhibiting the characteristics of *Salmonella* were stab-inoculated in slants of dulcitol lysine iron agar (Taylor and Silliker, 1958; Taylor, 1961) and suspended in polyvalent 'o' antiserum. Plates of TGEA were incubated at 30°C. for 3 days. The number of colonies developing on this medium was used as an index of the general microbiological quality of the materials under examination. In addition, randomly selected colonies were replated to ensure purity. These isolates were examined in sufficient detail to assign them to genera. The following properties were used for this purpose: morphology, motility, pigment production, reaction to Gram's stain, production of oxidase (Kovacs, 1956), liquefaction of gelatin, and action on glucose contained in the medium of Hugh and Leifson (1953). In addition, the method of Rhodes (1958) was used to determine the type of flagellation on aerobic gram-negative bacteria and those having biochemical properties similar to *Aeromonas* (Eddy, 1960, 1962). Medium B of King *et al.* (1954) was used to test an organism's ability to produce a fluorescent, water-soluble pigment. Members of the coliform group of bacteria were examined by the IMViC series of tests.

RESULTS AND DISCUSSION

The results from an examination of 33 egg cases are summarized in Table 1. In the majority of instances, the interior bottom surface of the cases harbored from 10^6-10^8 microorganisms. Colonies developing on TGEA indicated that molds, particularly *Penicillium* spp., and aerobic spore-forming bacilli, were the

TABLE 1.—*Incidence of microorganisms on the interior surface of the bottom of egg cases*

Thousands of organisms	Number of samples
1-10	1
100-1,000	6
1,000-10,000	13
10,000-100,000	13

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[4] John Oster Mfg. Co., Milwaukee, Wisconsin.

most prevalent contaminants. Coliform organisms were recovered from 4 of the 33 cases and enterococci from 21 cases.

In commercial practice, the fillers and flats protect eggs from contamination with the organisms present in the case. There is a possibility, however, that these organisms may be introduced to the atmosphere when eggs are being unpacked. This possibility was investigated, and the results are shown in Figure 1. The petri dish on the left side was exposed in a small room, and the one on the right was exposed in the same room after 4 egg cases had been unpacked. It would appear that the creation of an aerosol during the unpacking of eggs may be an important source of contamination in egg-breaking plants, particularly as these commonly receive grade C eggs in containers considered too old or dirty for re-issue to the egg producer.

Figure 2 contains the results obtained from a survey of flats. In general, the lowest level of contamination was found on new flats and the highest on dirty flats. A similar trend (Table 2) was also evident in the isolation of coliforms and enterococci. Aerobic spore-forming bacilli were the dominant organisms on new flats, whereas a heterogeneous microflora was isolated from the used and dirty flats. A survey of fillers did not produce similar trends. It will be seen in Figure 3 that the majority of fillers harbored about a million microorganisms regardless of whether the fillers were new or used. The highest counts were given by the dirty fillers. The high incidence of contamination of new fillers with enterococci (Table 2) was a notable feature of this survey. Many colonies developed on plates of Barnes' (1956) medium that had been exposed to the atmosphere in the unloading area of the grading station. For this reason, it was concluded that new fillers were contaminated during storage in this area.

The flats have a mat-finish, and considerable areas of their irregular surfaces are always exposed, thus predisposing

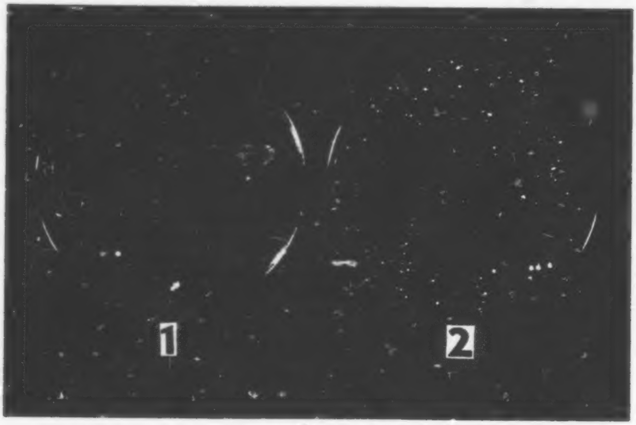

FIG. 1. Effect of unpacking on contamination of room air in egg plant. Dish No. 1, before unpacking; Dish No. 2, after 4 cases were unpacked.

TABLE 2.—*Recovery of coliforms and enterococci from fillers and flats*

		Number of samples	Percent contaminated with:	
			Coliforms	Enterococci
Flats	New	18	0	17
	Used	35	32	83
	Dirty	33	55	88
Fillers	New	14	0	79
	Used	34	18	82
	Dirty	29	19	100

these structures to heavy contamination. This would appear to be the reason for the trends shown in Figure 2. The fillers on the other hand, have a hard, smooth surface and, when not in use, ony a small area is exposed. This may account for the greater uniformity in the levels of contamination (Figure 3) found with new, used, and dirty fillers.

An attempt to demonstrate the transter of organisms from dirty fillers and flats to the shell of eggs yielded the results presented in Figure 4. Neither the conditions of storage nor the state of the fillers and flats had any detectable effect on the level of contamination on the shells of naturally clean eggs.

The level of contamination on the shells of eggs entering the grading station ranged from 10^2-10^8 microorganisms per shell. The results obtained from a survey of large clean (grade A) and lightly soiled eggs (grade B) are presented in Figure 5. The range of counts shown by these eggs was larger than those reported by Haines (1938), Rosser (1942) and Forsythe *et al.* (1953). In general, the clean eggs harbored fewer organisms per shell than did the lightly soiled eggs. Further evidence of a general relationship between the levelof contamination and the cleanliness of the shell was provided by grade C eggs. In this instance (Figure 6), stained and soiled eggs had counts ranging from 10^3-10^6 organisms per shell and badly-soiled eggs harbored from 10^4-10^7 organisms per shell. Coliform organisms

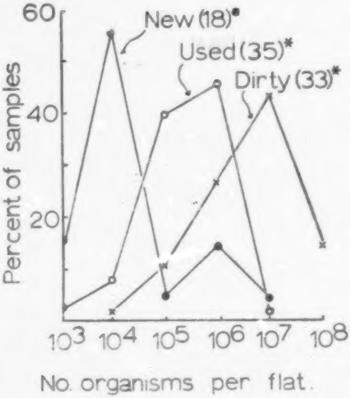

FIG. 2. Frequency distribution of contamination on flats.
* Number of samples examined.

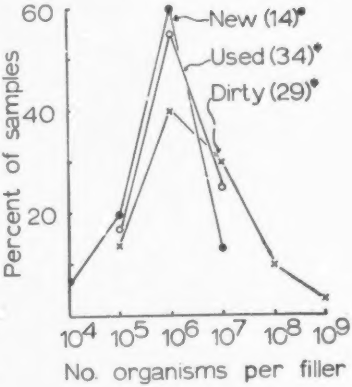

FIG. 3. Frequency distribution of contamination on fillers.
* Number of samples examined.

Table 3.—*Recovery of coliforms and enterococci from the shells of eggs*

Grade of eggs	Number of samples		Percent contaminated with:			
			Coliforms		Enterococci	
	Initially	After 1 week at 10°C.	Initially	After 1 week at 10°C.	Initially	After 1 week at 10°C.
A	73	50	10	6	60	*
B	77	50	22	16	69	52
C	74	50	27	26	55	40

* Not analysed.

and enterococci were isolated from all grades of eggs (Table 3), but the higher incidence of contamination of grade B and C eggs indicates that fecal material was often included in the dirt present on the shells.

Storage for 1 week at 10°C. did not have any appreciable effect on the level of contamination on the shells of grade A and B eggs. These results are in accord with those of other investigators (Haines, 1938; Forsythe *et al.*, 1953) who have concluded that the shell does not support microbial multiplication unless eggs are stored under very humid conditions. The greatest range of contamination (Figure 6) was exhibited by cracked or checked grade C eggs. An assumption that bacterial multiplication was promoted simply by the cracking of the shell was not supported by the results obtained in the following experiments. An area of 1 cm.² on the shell at the equator of naturally clean eggs was inoculated with a paste prepared from deep-litter material. The contaminated shells of some of the eggs were cracked, and, in others, the underlying shell membranes were punctured with a sterile scalpel. The method described earlier was used to determine the numbers of microorganisms on the shell. In addition, the contents were shaken by

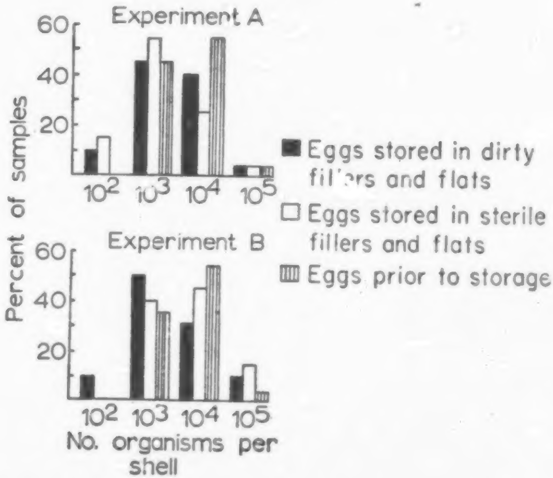

Fig. 4. Frequency distribution of contamination on the shells of eggs (20 per sample) that had been placed on dirty or sterile fillers and flats. Experiment A: eggs stored for 1 week at 10°C. Experiment B: eggs stored for 3 days at 20°C. and "sweated" on 2 occasions.

TABLE 4.—*The incidence of contamination of egg content after various shell treatments*

	Egg shell:		
	Contaminated[1]	Contaminated and shell cracked	Contaminated, shell cracked, and shell membranes punctured
Number of contents examined	24	24	23
Percent contaminated	17	54	74
Range of contamination[2]	10-1,800	50-3,380	50-25,000
Average level of contamination	83	262	4,570

[1] A paste prepared from deep litter material was applied to an area of 1 cm.^{2} on the shell surface.
[2] Number of organisms per contents.

hand in a sterile jar until the yolk and white were blended, and 5, 1 and 0.1 ml. amounts were added to 10 ml. TGEA. The puncturing of the shell membranes, the shell or both did not result in a marked increase in the level of contamination of all the shells. The possibility that a particular fraction of the microflora proliferated at the expense of the others present at the beginning of the experiment was discounted by an examination of 40 colonies randomly selected from each of several plates of TGEA. These were streaked on nutrient agar and, after incubation at 30°C. for 24 hours, stained by the method of Gram. This revealed that arthrobacters and, to a lesser extent, micrococci were dominant throughout the experiment. Thus, it would seem that, in addition to the cracking of the shell, the promotion of bacterial multiplication in checked or cracked eggs is dependent upon factors such as specific types of bacteria and age of egg. Table 4 shows that fracturing the shell and shell membranes increased the incidence of contamination of the contents of the eggs. Since it was necessary to examine the shells of these eggs prior to sampling the inner contents, it was not possible to make the latter examination under strictly aseptic conditions. Nevertheless, these results are worthy of note in relation to the possible lowering of the microbiological quality of egg products by the use of cracked or checked eggs.

More than 600 isolates from fillers, flats, and egg shells were examined. The distribution of the various genera recovered from these materials is given in

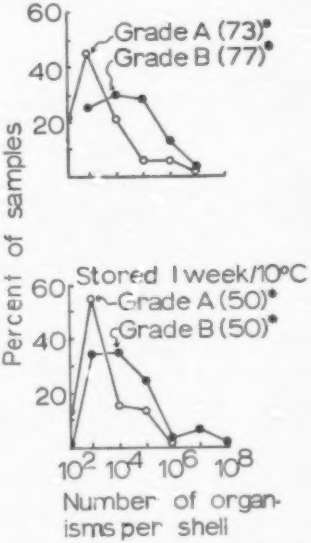

FIG. 5. Frequency distribution of contamination on the shells of eggs.

* Number of eggs examined.

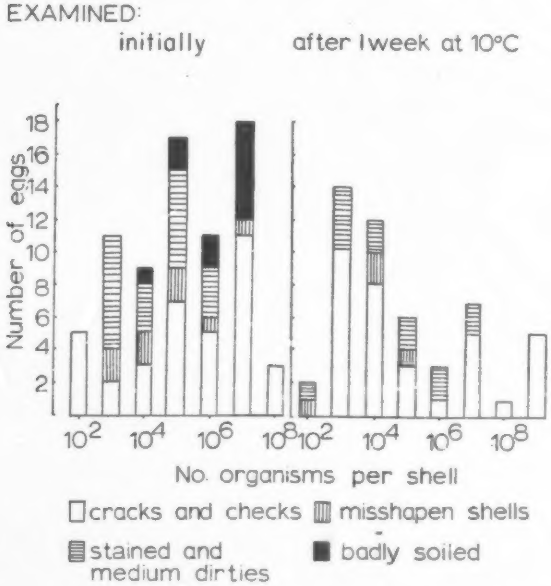

Fig. 6. Frequency distribution of contamination on the shells of various types of grade C eggs.

Table 5. The prevalence of the various types of bacteria growing on TGE agar can be listed as follows: gram-positive cocci > gram-negative rods > Arthrobacter > Bacillus. This sequence differs from that reported by Haines (1938) who found that gram-negative rods (38%), Bacillus (30%), and gram-positive cocci (25%) constituted the major fractions of the 100 isolates which he obtained from the shells of English eggs. Geographical differences and the fact that Haines did not examine fillers and flats may account for the difference between his results and those reported here.

The method of Florian and Trussell (1957) was used to test the rot-producing ability of representative strains of the groups listed in Table 5. A dilute cell suspension was inoculated into the cell of 6 eggs (these were 4 days old at the time of inoculation), and 2 eggs were stored under each of the following conditions: 42 days at 10°C.; 35 days at 10°C. followed by 7 days at room temperature, or 42 days at room temperature. The results are given in Table 6. When the eggs were opened, the rots were identified according to the descriptions given by either Haines (1939) or Florian and Trussell (1957). In addition, the purity of an infection in an egg was checked by subculturing a loopful of the contents on nutrient agar. The eggs inoculated with gram-positive bacteria did not manifest signs of spoilage, nor did their contents yield viable organisms.

TABLE 5.—*The distribution of various types of bacteria on egg shells, fillers and flats*

Organism	Used fillers and flats	Numbers isolated from: Egg grade: A	B	C	Total number isolated	Percent of total
Gram-positive cocci						
Micrococcus	94	49	86	53	282	47.8
Staphylococcus (Mannitol-negative)	2	9	1	14	26	
Gram-positive rods						
Arthrobacter	41	7	22	12	82	12.7
Bacillus	13	—	4	—	17	2.6
Gram-negative rods						
Pseudomonas						
A. Fluorescent	1	2	4	1	8	26.8
B. non-pigmented, proteolytic	10	18	14	13	45	
C. non-pigmented, non-proteolytic	3	9	3	16	31	
Achromobacter	5	2	3	1	11	
Alcaligenes	9	—	3	—	12	
Flavobacterium	1	—	—	—	1	
Cytophaga	1	—	2	—	3	
Unclassified	14	29	9	8	60	
Escherichia	18	6	12	3	39	9.5
Aerobacter	10	8	1	[illegible]	22	
Aeromonas	3	1	—	2	6	

TABLE 6.—*Ability of bacteria isolated from egg shells, fillers and flats to produce rots in eggs*

	Number of strains	Changes occurring in eggs inoculated at air cell stored: 10°C. for 42 days: Type of rot	10°C. for 42 days: Day detected by candling	10°C. for 35 days followed by room temperature for 7 days: Type of rot	10°C. for 35 days followed by room temperature for 7 days: Day detected by candling	Room temperature for 42 days: Type of rot	Room temperature for 42 days: Day detected by candling
Micrococcus	4	—	—	—	—	—	—
Staphylococcus	3	—	—	—	—	—	—
Arthrobacter	6	—	—	—	—	—	—
Bacillus	2	—	—	—	—	—	—
Escherichia	4	—	—	—	—	—	—
Aerobacter	3	+	—	BR	42	BR	18
Aeromonas	2	BR	42	BR	42	BR	18
Pseudomonas:							
Fluorescent	1	FGR	—	FGR	—	FGR	—
Non-pigmented proteolytic	6	GR	42	GR	42	GR	18
Non-proteolytic	2	+	—	YR	42	YR	18
Achromobacter	2	+	—	GR	42	GR	18
	2	—	—	—	—	—	—

—: no change in appearance of egg and no organisms recovered.
+: only a slight change in appearance of egg and viable organisms recovered.
BR: black rot type 1 of Haines (1939). The following were identified with descriptions given by Florian and Trussell (1957): FGR, fluorescent green rot; GR, green rot; YR, yellow rot.

A similar situation was observed with eggs that had been inoculated with 4 strains of *Escherichia* and 2 out of 4 strains of *Achromobacter*. With the other gram-negative bacteria, viable organisms were recovered from the contents of all of the eggs. Thus, it would seem that the majority of gram-negative bacteria present on the shell and on egg packing materials are potential colonizers of the contents of eggs. The rate of colony formation, as judged by candling, was slowest in eggs held at 10°C. Moreover, the changes produced in these eggs were not as distinct or characteristic for a particular organism as were those in eggs that had been stored at room temperature either briefly or for the duration of the experiment. The rots obtained in the latter group were used for the identification given in Table 6.

The data presented in Table 5 can be used to deduce the most probable sources of contamination to which eggs are exposed. Members of the genus *Micrococcus* are widely distributed in dust and on the surfaces of inanimate objects (Abd-el-Malek and Gibson, 1948; Baird-Parker, 1963). The same authors considered that mannitol-negative strains of *Staphylococcus* are common residents on the skin of warm blooded animals. Thus, the cultures isolated in this study may have originated on the skin of hens or egg-handlers. Rosser (1942) found that eggs handled normally were more heavily contaminated than those handled under aseptic conditions. *Arthrobacter*, which was not isolated by Haines (1938), is among the numerically predominant genera of microorganisms in soil (Topping, 1937). Evidence of contamination with fecal material was also indicated by the isolation of strains of *Escherichia* that produced acid and gas from lactose at 44°C.

Surprisingly few isolates of fluorescent pseudomonads were recovered in view of the common occurrence of these organisms in spoiled eggs. As far as can be ascertained, the present study is the first in which *Aeromonas* has been recovered from eggs in the U.S.A., although these organisms have been isolated from Canadian eggs by Florian and Trussell (1957). These investigators identified their isolates with *Proteus melanovogenes*. Two workers in England, Miles and Halnan (1937), gave this name to the organism which they isolated from imported South African eggs. Subsequent examinations (Miles and Miles, 1951; Eddy, 1960) of several of the original isolates have shown that, because of their polar flagellation and their utilization of glucose under anaerobic conditions, these organisms should be included in the genus *Aeromonas*.

The properties considered for identification of the aerobic, gram-negative bacteria are listed in Table 7. Possible practical implications of the relatively heavy contamination of egg shells with the types of organisms were suggested by the results obtained from an examination of the contents of stored eggs. Fifty-three eggs were stored at 10°C. for 4–7 months after they had been submerged for 5 minutes in cold (10°C.) sterile distilled water. Frequent candling did not reveal evidence of microbial spoilage. Similarly, the contents of the broken-out eggs did not develop off odor or exhibit features other than those associated with the aging of an egg. Nevertheless, the contents of 26 eggs contained 780 to more than 500,000 bacteria. An investigation of 50 isolates showed that the eggs were contaminated with non-proteolytic members of the genera *Pseudomonas*, *Achromobacter*, and *Alcaligenes*.

Several investigators (Haines, 1939; Alford *et al.*, 1950; Florian and Trussell, 1957) have isolated non-proteolytic strains of the coli-aerogenes group of bacteria, pseudomonads, achromobacter, and alcali-

TABLE 7.—*The properties of the obligate aerobic, gram-negative bacteria isolated from egg shells and egg-packing materials*

Genus	Group	Number of isolates	Flagellation	Glucose[1]	Oxidase	Hydrolysis of:			H_2S Production[3]	Pigment[4]
						Arginine[2]	Gelatin	Egg white[3]		
Pseudomonas	A	8	Polar		+	+	1*	1	1	Fluorescent green
Pseudomonas	B	45	Polar	A, a or K	41	1	+	+	+	—
Pseudomonas	C	31	Polar	A, a or K	23	4	—	—	19	—
Achromobacter		11	Peritrichous	A or a	4	—	2	2	4	—
Alcaligenes		12	Peritrichous	K	1	—	3	3	1	—
Flavobacterium		1	Peritrichous	A	—	—	—	—	—	Yellow
Unclassified		60	Non-motile	A, a or K	d	d	d	d	d	—

[1] Tested in the medium of Hugh and Leifson (1953). A = strong acid reaction; a = weak acid reaction; K = alkaline reaction.
[2] Medium of Thornley (1960).
[3] The dissolution of a piece of heat-coagulated egg white in 1% (w/v) casitone water was regarded as a positive result; the blackening of a piece of lead acetate paper suspended over this medium was considered to be evidence of H_2S production.
[4] Tested on the medium of King *et al.* (1954) and milk agar.
* Numerals = numbers of positive strains. + = all strains positive. — = all strains negative. d = different reactions.

genes from eggs which did not exhibit any of the features normally associated with microbial spoilage. In other instances (Turner, 1927; Spanswick, 1932; Levine and Anderson, 1932; Richard and Mohler, 1950), bacterial contamination has been associated with the contents of eggs that differed from sterile eggs only in the possession of an off-odor or off-flavor. Both Brooks (1960) and Board (1962) have found that non-spoilage organisms of this type give a pattern of multiplication in eggs similar to that of spoilage organisms. The incidence of such contamination in commercial eggs together with its influence on the level of contamination of egg products would appear to be worthy of further exploration. It is pertinent to note that such contaminated eggs were recovered occasionally from egg breaking plants by Johns and Berard (1945, 1946).

Only one strain of *Salmonella*, *S. senftenberg*,[5] was isolated in this study. This organism was recovered from the shell of a lightly soiled egg.

SUMMARY

Colony counts obtained on tryptone glucose extract agar were used to assess the level of contamination on the shells of eggs and egg-packing materials entering an egg grading and candling station. The level of contamination ranged from 10^2–10[illegible] organisms per egg shell. Coliforms and enterococci were isolated from all grades of eggs, but the highest incidence of contamination was found on grade B and C eggs. The results obtained from an examination of new, used, and dirty flats revealed that these become heavily contaminated during use, especially if they are soiled with albumen or yolk. The recovery of coliforms from 31% and 55% respectively of the used and dirty flats indicate that these are often exposed to material of fecal origin. There were no marked differences in the level of contamination of new, used, or dirty fillers; the majority of samples harbored about a million organisms per filler. There was no demonstrable increase in the level of contamination on the shells of naturally clean eggs when these were placed in dirty fillers and flats and stored under various conditions. Of 33 egg cases, all but one gave counts in the range 10^5–10^8 organisms per bottom (interior surface) of case. The unpacking of cases was found to produce heavy aerial contamination. An examination of more than 600 organisms isolated from egg shells, fillers, and flats indicated the following to be the most common contaminants: gram-positive cocci, gram-negative rods, *Arthrobacter*, and *Bacillus*. It was concluded that dust, soil, and fecal material are the usual sources of contamination to which eggs and egg-packing materials are exposed.

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[5] The authors are indebted to Miss Alice Moran, National Animal Disease Laboratory of the U.S.D.A., Ames, Iowa, for the identification of this organism.

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PRESERVATION OF EGGS

II. SURFACE CONTAMINATION ON EGG-SHELL IN RELATION TO SPOILAGE[1]

BY F. T. ROSSER[2]

Abstract

The method devised to measure surface contamination on shell eggs was to wash eggs with water in a "Waring blendor" and make bacteriological and mould counts on the wash water. To determine the degree of internal contamination, a small electric hand drill was used to cut holes in the shell in order to remove the egg contents under sterile conditions. The egg meats were mixed in the blendor before plating.

External mould growth, after storage for six weeks, under adverse conditions of both temperature and humidity, did not bear any close relation to the amount of mould contamination initially present on the shell. Both oil dipping and handling stimulated the growth of external moulds.

Internal spoilage, as determined by candling at the end of the storage period, was greatest for eggs having a high initial shell count and least for those with a low initial count. Oiling, or disinfecting with hydrogen peroxide followed by an oil dip, did not reduce spoilage. Storage life was increased by strict observance of recognized sanitary practices.

Introduction

It is generally accepted that egg spoilage is usually caused by organisms which enter through the shell (3). If this is true the early elimination of surface contamination followed by sealing the shell pores should considerably reduce losses in storage. This study was undertaken to determine the relation existing between the numbers of bacteria and moulds on the exterior surface of shell eggs and subsequent spoilage in storage, and to assess the value of oil as a sealing agent against the entrance of micro-organisms into the egg.

Methods

Determinations of the number of moulds and bacteria on outer shell surfaces were made by washing eggs in a "Waring blendor"* and plating the wash water on a suitable medium. An open wire basket was constructed to fit closely to the sides of the blendor container and of such a length that the bottom was suspended just above the propeller blades. Three eggs, placed in the basket, were covered by a measured amount of sterile water and the machine operated at high speed for three minutes. Preliminary investigation had shown that further washing removed a negligible number of organisms and tended to raise unduly the temperature of the wash water. Recognized bacteriological technique was used throughout. Eggs were untouched by hand during the experiment, metal lifters being used to move tray lots, and crucible tongs or loops made from stiff wire to manipulate individual eggs. The glass blendor containers and their plastic tops were sterilized in a water-bath the temperature of which was raised to above 80° C. for 10 min. Samples of the wash water were plated in duplicate on proteose peptone tryptone agar for bacteria and on potato dextrose agar for moulds. Plates were incubated for seven days at 20° C.

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[1] *Manuscript received September 2, 1942.*

Contribution from the Division of Applied Biology, National Research Laboratories, Ottawa. Issued as Paper No. 80 of the Canadian Committee on Food Preservation, and as N.R.C. No. 1085.

[2] *Mycologist, Food Investigations.*

* *Manufactured by the Waring Corporation, New York, N.Y.*

To determine quantitatively internal contamination of eggs it was essential that the contents be removed aseptically. The following procedure was found satisfactory for this purpose. The egg was held in a clamp on a ring stand and both ends were painted with iodine. A circle about one-quarter inch in diameter was cut in the shell at the air cell end with a small electric hand drill and a small hole was bored at the opposite end of the egg, care being taken not to puncture the membranes. The cut surfaces were again treated with iodine, after which the excised portion of the shell and the outer membrane were removed with sterile forceps and the membrane below the small hole at the opposite end of the egg was punctured with a sterile needle. The egg was then inverted over a sterile beaker, the lid of which was removed momentarily, and filtered air under pressure applied to the hole in the small end of the egg. In this way the inner membrane was broken and the contents expelled quickly through the large opening, often without breaking the yolk. The meats from the six eggs in each treatment, except those accidentally cracked, were removed as described, poured into the blendor container and mixed for three minutes. Aliquots (1 cc. and 1/10 cc.) were plated in duplicate for the bacterial count. Methods of examination following storage comprised observation of each egg under a strong light for exterior growths and careful candling before a lamp to detect interior defects. All doubtful eggs were broken open and scrutinized under the light.

Experimental

The storage experiment which was begun during the latter part of February was designed statistically in a 6 × 6 Latin square arrangement of half-case units. Each of the six half-case units contained six trays of eggs, each tray of 30 eggs being representative of one of six treatments. Three dozen eggs were secured for each replication of each treatment, six of which were selected at random for initial determinations and the remainder (30) used for the storage experiment. The treatments were as follows:

A. Market eggs (obtained as required from a local egg grading station)
  (1) Grade A Pullet: untreated.
  (2) Grade A Pullet: given oil dip.
  (3) Grade A Pullet: immersed in 3% commercial hydrogen peroxide, dried, and given oil dip.
  (4) Grade A Pullet: immersed in bath containing average of 75,000,000 bacteria and 600,000 moulds per cc.

B. Producer eggs (from a flock kept under excellent conditions)
  (5) Grade A Medium, day-old: graded and handled by producer in usual manner.
  (6) Ungraded, day-old: collected and candled with dry gloved hands.

A commercial, colourless, odourless, tasteless, paraffin base, egg-dipping oil, having a pour point of 40° F. was used for the oil dipping treatments. Each half-case unit was stored for a total period of six weeks under the conditions, indicated in Table I, which were considered suitable for accelerating egg spoilage.

TABLE I

STORAGE CONDITIONS EMPLOYED FOR HALF-CASE UNITS OF EGGS

Half-case No.	Time stored (days)	
	Alternating every two days: 17.6° C. and 95.7% R.H.* 23.5° C. and 69.6% R.H.	Constant: 21° C. and 90% R.H.
1	32	10
2	29	13
3	28	14
4	27	15
5	26	16
6	25	17

*R.H. = *relative humidity.*

The six eggs selected for initial examination were washed in two batches of three each and the average number of organisms was calculated on a "per egg" basis for each treatment. After the eggs had dried they were stored at 0° C. until it was convenient to examine the contents (in no instance for longer than 11 days).

TABLE II

INITIAL BACTERIA AND MOULD COUNTS ON SHELL EGG SURFACES

Condition before washing	Number of eggs washed	Average count per egg	
		Bacteria	Moulds
A. Market eggs			
Untreated*	72	70,000	1600
Dipped in hydrogen peroxide**	36	730	0
Dipped in contaminant**	36	2,780,000	29,000
B. Producer eggs			
Ordinary handling	36	103,000	43
Handled with gloved hands	36	9500	45

* *Includes eggs for control and oil dip treatments.*

** *Allowed to dry off before washing (one to two hours in laboratory).*

Table II shows the results obtained for exterior contamination on the variously treated shell eggs prior to storage. When the difference in size of the eggs was considered, the bacterial count on Grade A market eggs of unknown history was of the same order as that from producer eggs ordinarily handled, but the mould count was about 30 times as high. The producer eggs untouched by hand, however, showed approximately one-tenth the bacterial count of those handled whereas the mould counts were almost identical. Following hydrogen peroxide treatment counts for both moulds and bacteria were very low, and after dipping in the contaminated bath, very high.

Examination of egg meats revealed the presence of bacteria in only one group of six market eggs (100 bacteria per cc.). This contamination may, of course, have been contributed by only one of the eggs. No moulds were found in any of the meat samples.

The percentages of eggs having external mould and internal mould or bacterial growths at the end of the storage period are given in Tables III and IV, respectively. Because of the differences in percentage of the various amounts

TABLE III

MOULD GROWTH ON EGG SHELL SURFACES AFTER SIX WEEKS' STORAGE

Treatment	Percentage with mould growth on shell						
	Half-case number						Average
	1	2	3	4	5	6	
A. Market eggs							
Untreated	63.3	40.0	60.0	100.0	60.0	80.0	67.2
Oil dipped	100.0	100.0	100.0	100.0	100.0	100.0	100.0*
Hydrogen peroxide treated and oil dipped	96.7	100.0	100.0	100.0	100.0	100.0	99.4*
Dipped in contaminant	66.7	100.0	100.0	90.0	0.0	70.0	71.1
B. Producer eggs							
Ordinary handling	100.0	100.0	16.7	96.7	100.0	30.0	73.9
Handled with gloved hands	6.7	26.7	36.7	10.0	20.0	90.0	31.7

* *Differed significantly from market eggs, untreated.*

TABLE IV

INTERNAL EGG SPOILAGE AFTER SIX WEEKS' STORAGE

Treatment	Percentage spoilage						
	Half-case number						Average
	1	2	3	4	5	6	
A. Market eggs							
Untreated	10.0	13.3	50.0	63.3	80.0	96.7	52.2
Oil dipped	56.7	40.0	86.7	80.0	86.7	73.3	70.6
Hydrogen peroxide treated and oil dipped	30.0	23.3	43.3	76.7	86.7	93.3	58.9
Dipped in contaminant	40.0	76.7	86.7	86.7	70.0	90.0	75.0*
B. Producer eggs							
Ordinary handling	0.0	6.7	33.3	13.3	83.3	63.3	33.3*
Handled with gloved hands	0.0	13.3	40.0	36.7	30.0	60.0	30.0*
Half-case average	22.8	28.9	56.7	59.4	72.8	79.4	

* *Differed significantly from market untreated.*

TABLE V

ANALYSIS OF VARIANCE OF EGG SPOILAGE

Source of variance	Degrees of freedom	Mean square	
		External mould	Internal spoilage
Half-case replicates	5	194.98	1558.46**
Tray position in case	5	743.77	102.62
Treatments	5	2679.99**	1013.31**
Residual error	20	465.38	117.64

** *Exceeds mean square error, 1% level of significance.*

of spoilage the data were transformed to angular measure according to the formula $p = \sin^2 \theta$ (1, Table 12) in order to stabilize the variance for statistical analysis. Table V shows the analysis of variance of these transformed quantities. The effect of initial treatment reached the level of statistical significance for both external mould growth and internal spoilage. In addition significant differences in internal spoilage were observed between replicate half cases. Tray positions within the case had little effect. A statistical analysis of the relation of position in the tray to both external and internal spoilage showed no significant difference in either respect between eggs at the outside of the trays and those on the inside.

The amount of external mould on unhandled producer eggs was less than on those subjected to all other treatments (Table III). Individually these differences were statistically significant for all except untreated market eggs in which the difference almost reached significance. Oil dipped eggs and those treated with hydrogen peroxide followed by an oil dip had more external mould growth than those of any of the other treatments and the differences were statistically significant except between the hydrogen peroxided oil dipped eggs and producer eggs handled in the ordinary manner. Untreated and contaminated market eggs and ordinarily handled producer eggs showed only small differences among themselves in the average amount of external mould growth.

The average percentage of internal spoilage at the end of the storage period was markedly less in producer eggs than in any of the four categories of market eggs (Table IV), and these differences were statistically significant. Although unhandled eggs had the least internal spoilage the difference between the producer egg treatments was very slight. In the market eggs the greatest average spoilage occurred in the contaminated lots and statistical analysis showed the difference between this and the untreated to be significant. While the observed spoilage in the oiled eggs was somewhat greater than in the untreated, the difference was not statistically significant. A progressive increase occurred in the half-case average percentage internal spoilage which was statistically highly significant.

Discussion

There seems to have been no clear cut relation between the number of moulds originally present on the shells of the eggs and their subsequent growth on the surface during storage. Under the severe storage conditions of this experiment, however, it is evident that oil dipping and handling both favoured the growth of exterior moulds. That mould growth is greater on oiled than on unoiled eggs after storage at temperatures and humidities approximating the severest summer conditions, is in agreement with previous work (5).

Since only one of the original 36 groups of eggs showed infection in the egg meats, it seems reasonable to conclude that most of the organisms causing interior spoilage at the end of the storage period entered from the outside. The significant differences found between the spoilage of producer unhandled (low count) and market untreated (medium count) eggs and between untreated and contaminated (high count) market eggs suggest that the amount of shell contamination may play an important part in internal egg spoilage, but since treating market eggs with hydrogen peroxide (very low count) before oil dipping made little difference to either exterior mould growth or interior spoilage, it seems possible that shell penetration by micro-organisms in this instance had proceeded to the point where surface disinfection had little value. On the other hand in spite of the fact that producer ordinarily handled eggs had heavy exterior mould growths, the amount of internal spoilage was small which indicates that fresh egg might be bacteriostatic and mouldistatic.

The progressive increase in internal spoilage in each half-case lot (Table IV), the only difference in treatment being the time each case was stored under alternating and constant conditions of temperature and humidity (Table I), suggests that interior spoilage is hastened when both temperature and humidity are high. This observation is substantiated by other investigations (2, 4).

The wearing of clean dry gloves whenever eggs are to be handled is a practice which can be recommended. There is no doubt that a reduction in egg spoilage losses could be effected by a more rigid application of recognized sanitary practices both by the producer and in the trade.

Acknowledgments

Grateful acknowledgment is made to the Poultry Division, Central Experimental Farm, Ottawa, especially to Mr. G. Robertson and Dr. S. S. Munro who made arrangements for supplying day-old eggs. The author wishes to thank Dr. J. W. Hopkins, Statistician, National Research Laboratories, for statistical advice.

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Mr. OLIN. Thank you, Dr. Stadelman, and my confidence was justified. You may want to add whatever else you wanted to say during the question period.

Dr. Liewen.

STATEMENT OF MICHAEL B. LIEWEN, ASSISTANT PROFESSOR, DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY, UNIVERSITY OF NEBRASKA

Dr. LIEWEN. Thank you, Mr. Chairman, for the opportunity to address the subcommittee today. The subcommittee does have a written record of my testimony, so in the interest of time, I will just attempt to summarize some of the concerns that I have, and I am going to address concerns from a microbiological viewpoint of the use of this centrifugal egg breaking machine.

I might just state that my area of specialty in the academic community is that of a food microbiologist. I will attempt to limit my comments to that of the microbiology of the egg and of this type of processing.

My first concern from a microbiological viewpoint really comes about with the structure of the egg shell itself. I think the committee should be aware that the egg shell itself is a very porous material. It is really not a barrier to bacteria at all. It is not impermeable. An average egg shell contains about 9,000 of these pores. These pores are no barrier to bacteria at all. I guess it would be analogous to a boat going down the Potomac River. Bacteria can very easily penetrate these pores.

Washing and sanitizing of eggs that is required by law will eliminate surface contamination from the egg shell, but it will not completely eliminate bacteria that have penetrated the pores of the egg shell and it will not, of course, eliminate bacteria or destroy bacteria that have penetrated the pores and are on the inner membrane of the egg shell.

There has been previous scientific work, and I am referring to published scientific work, which is referred to in my testimony, which states this to be true. This is not just something that I am stating. I am at this point stating previous scientific work. Other scientific work does state that crushing and pulverizing of an egg shell will release substantially more bacteria to the liquid egg than will hand breaking of an egg.

Another point that should be made to this subcommittee is that the appearance of an egg shell is really no guarantee of its cleanliness or is really no indication of its bacteria population. In other words, there is no good correlation between a good clean egg and the types or the number of bacteria that may be present in or on the shell.

Another concern from a microbiological viewpoint, of course, is the commingling of the shell and the liquid. I think that point has been well addressed today. I might just note that there are scientific studies that show that there is an increase in bacterial numbers in the liquid egg as you have a greater commingling of the shell and the liquid.

Another concern, of course, is the lack of pasteurization of the egg product that is run through the centrifugal egg machine as op-

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posed to commercially processed eggs which do undergo pasteurization treatment. Pasteurization does greatly reduce—and I will not say eliminate—but it greatly reduces the risk of salmonella in an egg product.

Cooking is not always an adequate substitute for pasteurization. Of course, the heat treatment that is given food during cooking can vary greatly, and the responsibility of pasteurization, if that is what one wants to call it, in cooking is really passed on then from the processor to the food preparation handler. So, cooking can vary greatly depending on the food product and cannot always be depended upon to eliminate harmful bacteria.

Another point that needs to be brought up with the use of unpasteurized egg product in a food processing facility is the possibility of cross contamination from the liquid egg product to products which may not undergo further processing. This is a concern in not only food processing operations, restaurants, and bakeries, but also a concern to commercial egg processors. Commercial egg processors have compartmentalized their operations. In other words, every operation of a commercial egg breaking occurs in separate rooms so that there is greatly reduced risk of cross contamination.

One other point I would just like to mention at this point is that the centrifuge operates by spinning at about 3,500 rpms. I have no scientific basis for this statement, but I would like to indicate that there could be a possibility of creating aerosols, in other words, creating air borne product and, consequently, air borne bacteria which could be a source of cross contamination to food products.

Another point I would like to make is the lack of visual inspection that occurs with the egg breaking machine. This point has been adequately addressed earlier, so I will just pass over that.

I would like to address some scientific studies that are currently proceeding in my laboratory, and I would like to stress the point scientific studies. We have at this point been carrying on a scientifically based study evaluating egg products that are passed through this centrifugal egg breaking machine and we have evaluated them in comparison to hand broken eggs.

Very briefly, our results are that the coliform population in liquid egg that is passed through this machine will be about 30 to 60 times greater than that of hand broken eggs in our studies. Another additional point I would like to make is that at this point, we have evaluated nine different lots of USDA grade A eggs or better USDA graded eggs. We have managed to isolate the salmonella bacteria from three out of these nine lots of eggs that have been passed through the centrifugal egg breaking machine. We have not isolated salmonella from hand broken eggs.

One last point and then I will finish in the interests of time is that I would like to caution this subcommittee again about constantly dwelling on salmonella. Salmonella is a good bench mark and it is obviously a bacterium of public health concern, but there are also a lot of other bacteria out there that we need to be concerned with, and salmonella is not the only bacterium that could be of public health significance. Thank you, Mr. Chairman.

[The prepared statement of Dr. Liewen follows:]

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Microbiological Considerations of Using Centrifugal Egg Breaking Machines

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In recent months there has been controversy concerning the use of a centrifugal egg separator. This machine has been marketed throughout the United States to restaurants, bakeries and other food service establishments that utilize large numbers of eggs in their daily operations. Eggs are dumped from filler flats directly into this machine. The egg shell is crushed by centrifugal force and the whole egg separated from the egg shell. During this process, the egg contents and shell have extensive direct contact. There is debate concerning whether this method of separating eggs consistently yields a safe and wholesome product.

I first became involved with this machine about a year ago when I received an inquiry from the Administrator of the University of Nebraska's Dietitian Housing Office regarding the safety of eggs separated by the device. At the time I expressed concern about possible microbial contamination of product and recommended they continue to use pasteurized eggs. However, the Housing Office purchased a centrifugal separator and expressed satisfaction with its operation because of its speed and efficiency. During the summer of 1985, I received a second inquiry from the Housing Office regarding the centrifugal egg separator. They indicated that they were interested in purchasing three more machines, but asked if we could run tests to determine the safety of separated eggs. In consultation with Dr. Glenn Froning of the University of Nebraska's Department of Food Science and Technology, we indicated that such tests would be rather complicated, expensive and time consuming. However, we felt the matter needed investigation and pursued ways to fund the investigation. The majority of this study is funded by discretionary funds available to us at the University of Nebraska. We also solicited and received a small grant from the United Egg Association.

There are several concerns with the use of a centrifugal egg separator. Extensive direct contact occurs between the egg contents and shell (Figures 1 and 2). The manufacturers claim that this is not a public health hazard since they inform users to utilize U.S.D.A. Grade A clean eggs (which are washed and sanitized) and that all of the separated eggs should be thoroughly cooked. Although proper washing of eggs greatly reduces the microbial flora on the surface of the egg shell, it does not eliminate all contamination. In 1978, Moats reviewed the scientific literature on washing eggs. This review stated that washing and treatment of eggs with sanitizing chemicals did not destroy bacteria embedded in the shell. The pores of the egg shell actually protect the bacteria from inactivation. An average egg shell has about 9000 pores. Bacteria can easily enter and pass through these pores to the inner shell membrane. Even though an egg appears clean, it can harbor large numbers of harmful bacteria. Since the machine crushes the egg shell, the release of bacteria from the shell pores into the liquid egg is a real concern. Scientific studies have shown that pulverizing egg shells release substantial numbers of bacteria. Penniston and Hedrick (1947) determined bacterial loads on washed and sanitized eggs using two methods. One method involved rinsing the egg shell to determine bacterial contamination and the other procedure measured bacterial loads in pulverized shells. From six to twelve times more bacteria were recovered from pulverized shells than from rinsed shells. In a similar study, Gunaratne and Spencer (1973) observed bacterial counts on blended egg shells that were ten times greater than counts from rinsed shells. These results indicated that substantial numbers of bacteria may be embedded in the shell even when eggs are properly washed. Blended or pulverized shells should be roughly equivalent to crushed egg shells from an egg centrifuged separator.

Salmonella contamination is another concern with centrifugal egg separation. A study by Rizk et al. (1966) showed that disinfectants may be useful in controlling salmonellae present on the surface of the shell. However, they were not effective in inactivating salmonellae that had entered and penetrated the pores of the shell. Several other studies have also shown egg washing not to be totally effective in controlling salmonellae on egg shells (Willimas, 1959; Lancaster et al., 1952). Other studies have shown that salmonellae embedded in shells are not destroyed by sanitizing chemicals (Frank and Wright, 1956; Gordon et al., 1956; Lancaster et al., 1952; Williams and Dillard, 1973). These studies show that if bacteria, including pathogens such as Salmonella, are embedded in the shell of eggs, washing and sanitizing will not eliminate them.

Since studies have shown that pathogenic bacteria can survive washing and sanitizing of eggs and that pulverizing releases bacteria from the shell of washed eggs, we developed a study to investigate the microbiological population of eggs processed by several methods including centrifugal separation. Eggs were obtained from four different commercial sources. All eggs were U.S.D.A. Grade A or better. Eggs were separated using an "Egg Master" Model #81081-982 extraction according to manufacturer's instructions. Some eggs from each manufacturer were hand broken. Commercially processed and pasteurized eggs were also obtained. All samples were analyzed for Standard Plate Counts (SPC), coliforms and salmonella (Table 1). The SPC is intended to indicate the total level of microorganisms in a product. Coliform bacteria are considered to be indicators of fecal contamination of foods and water and include bacteria considered to be foodborne pathogens. Our results show that both SPC and coliform counts are higher in eggs separated by the Egg Master compared to hand breaking. The coliform counts were significantly lower in commercially pasteurized eggs compared to the Egg Master, but the SPC was not significantly different. SPC does not generally indicate bacteria of public health significance. Salmonella was isolated in one sample processed by the Egg Master.

Previous studies as well as this work indicate that salmonella can occur in unpasteurized egg products - even if the eggs are of the highest quality. Cooking eggs will not ensure that salmonella will be destroyed. There is the danger of undercooking the eggs, which is not unheard of in bakery products, omlettes, scrambled eggs and similar products. Furthermore, there is a real possibility of cross-contamination from eggs to foods which do not undergo further processing. These events could lead to outbreaks of foodborne illness.

Another problem with these machines is the inability to individually inspect each egg before breaking. If a bacterially spoiled egg is added, there is no way to detect it. Yet, one egg with an excessively high count could contaminate a complete batch of eggs.

Commercial egg processing operations are prohibited by law from separating eggs for human consumption by centrifugation. Furthermore, they are required to pasteurize all products. Proper pasteurization will destroy all bacteria capable of causing disease. Since these laws were adopted in 1970, no outbreaks of foodborne illness have been associated with commercially processed eggs. The only way to eliminate salmonellae and other harmful bacteria from eggs is through proper processing and adequate pasteurization.

(Attachments follow:)

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Table 1. Standard Plate Counts (SPC), coliforms and salmonella in egg products processed in different ways. Numbers are colony forming units per gram of sample.[1]

		SPC	Coliforms	Salmonella[2]
Source 1	Egg Master	325	46	-
	Hand broken	<1	<1	-
Source 2	Egg Master	82	53	-
	Hand broken	<1	<1	-
Source 3	Egg Master	325	38	-
	Hand broken	10 est.	<1	-
Source 4	Egg Master	262	62	+
	Hand broken	10 est.	<1	-
Commercially pasteurized		160	<1	-

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[1] Numbers are averages of four trials.

[2] + = positive, - = negative.

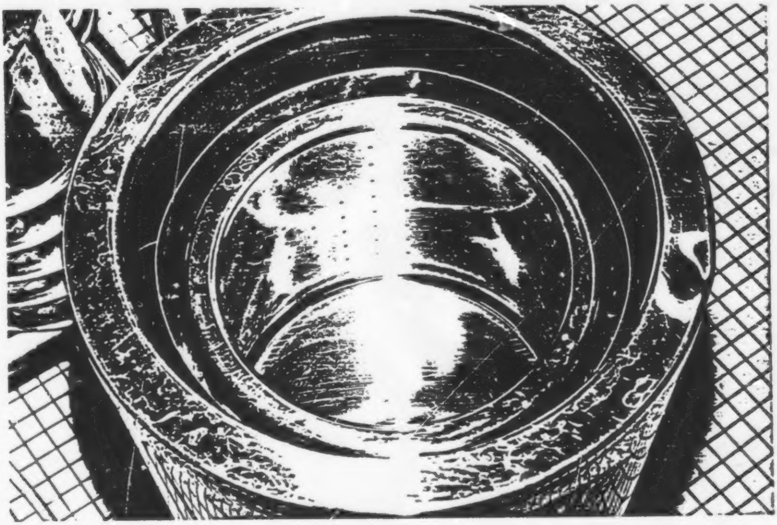

FIGURE 1. Egg Master Before Processing.

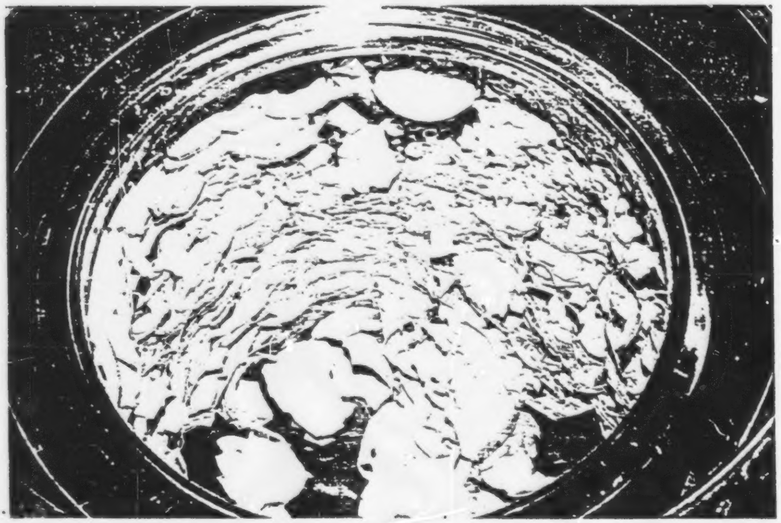

FIGURE 2. Egg Master Following Processing of Eggs.

Mr. Olin. May I ask you, Dr. Liewen, whether your testimony includes the data from your experiments or your research?

Dr. Liewen. The data is included in my testimony. However, I would like to take this opportunity to update my data on salmonella. When I prepared this testimony last week, we have since completed more studies. At that time I indicated one out of four lots that we had tested had been positive for salmonella. At this point, we have completed analysis of nine lots and three of those have been positive for salmonella.

Mr. Olin. We would be pleased to receive that additional testimony, if you send it in.

Dr. Liewen. I would be happy to do that.

Mr. Olin. I think your research is the only research that I have heard of along these lines to determine factually just how much bacteria is available from this machine process. So, if you could send us that, we would appreciate it.

Dr. Liewen. I will do that.

Mr. Olin. Mr. Volkmer.

Mr. Volkmer. Dr. Stadelman, you made a point, I believe, that the eggs as they are crated in the cases that the flats are not necessarily clean and that they are a source of contamination also. Have there been studies on this?

Dr. Stadelman. Yes, sir, there have.

Mr. Volkmer. It is probably common knowledge. I have bought eggs in a grocery store that are grade A that are not clean, too.

Dr. Stadelman. I have a reprint of the article, "Microbiological Contamination of Egg Shells and Egg Packing Materials" which was cited in my testimony. I did not include a copy of it in the testimony.

Mr. Volkmer. Could we have a copy furnished to the subcommittee?

Dr. Stadelman. I can give this copy to the subcommittee or send you as many copies as you need.

Mr. Volkmer. We appreciate it.

Mr. Olin. You could leave that with the clerk before you leave, as an attachment to your statement.

Mr. Volkmer. Yes, leave that with the clerk and we will examine that, because I think that has implications, too.

Dr. Stadelman. I have one other copy of an additional publication. This one was from Iowa State. The second is from Mr. Rosser working in Canada at the National Research Laboratories, and his is "Surface Contamination of Egg Shell in Relation to Spoilage." He gives a good idea of how many bacteria are on a clean egg in this publication. It is a Xerox copy; I will also leave it.

Mr. Volkmer. All right.

As I understand your testimony, Dr. Liewen, there is no way really to get rid of all bacteria from the outside of an egg and totally clean it. Is that correct?

Dr. Liewen. That is a correct point. The sanitation and cleaning of the egg that occurs in commercial processing will eliminate most if not all the bacteria on the surface. However, the bacteria that penetrate the pores of the shell are very difficult to eliminate and, commercially, there is just not a way to eliminate these bacteria.

Mr. VOLKMER. Will these bacteria be free to—in other words, as in the egg crushing machine that we have seen here, be free to separate themselves from the pores, from the outer part of the shell and go with the liquid?

Dr. LIEWEN. The crushing of the egg shell greatly increases the chance of that happening.

Mr. VOLKMER. All right. I have no further questions.

Mr. OLIN. The gentleman from Iowa, Mr. Bedell.

Mr. BEDELL. First of all, I want to thank you for your testimony, because it is, as far as I can tell, the first really scientific testimony that we have had.

Were either of you funded by anyone in any way that would have had any interest in this issue?

Dr. LIEWEN. Yes; my study was in part funded by the United Egg Producers. There may be some concern with that, but let me digress for just a second to indicate that I am a rather young assistant professor at the University of Nebraska, and for myself to carry out studies, I need fund programs to carry this out. I have many expenses and, of course, in these days of hard economic times, Federal and State support are being cut.

I was researching this area before I approached the United Egg Producers on funding, and the vast majority of the funding for this study comes from discretionary funds that are available to me as an assistant professor at the University of Nebraska. However, it is very common practice when a person is researching an area to look for areas of outside funding. In order for me to carry on study which I feel needs to be done, I approached several outside agencies in regard to outside funding.

Mr. BEDELL. Mr. Stadelman, are you in any way funded by anyone that would have any interest in this issue?

Dr. STADELMAN. No, I have not been. I have been retired for 2 years. I work just on my own now doing what I want to do, and this was an area of interest because it concerns me. I have been on the Indiana State Egg Board which is the regulatory agency for Indiana for 30 years now, and I know that the kinds of eggs that go into the consumer pack will have enough stains and bacteria on those shells so that if you start washing them off with the liquid contents, you are going to have bacterial counts far too high to destroy with 140 degree temperatures.

Mr. BEDELL. What are coliforms?

Dr. LIEWEN. Coliforms is simply an indicator of fecal contamination. It is a test that is used commonly in food and water testing, bacteriological or microbiological testing.

Mr. BEDELL. It would be bacteria that come from other than the egg itself. Is that what you are saying?

Dr. LIEWEN. Absolutely.

Mr. BEDELL. It comes from the handling of those eggs or something.

Dr. LIEWEN. It can come from the handling. It can be the result of fecal contamination from the hen during laying of the eggs. It could possibly come from human handling of the eggs also, but it is an indicator of fecal contamination.

Mr. **Bedell**. How do you account for the fact that hand broken eggs had a lot fewer of those than the ones that were broken by machine?

Dr. **Liewen**. It would be my viewpoint that since less of the liquid comes into contact with the shell that there would be less chance for release of bacteria from the shell and less chance of passing of bacteria present on the shell to the liquid of the egg.

Mr. **Bedell**. So, the contamination would get on the shell before it ever went through the commercial channels. Is that what you are saying?

Dr. **Liewen**. That is correct. When an egg is produced inside the hen, it is essentially sterile, but when it is laid, it becomes contaminated, and on a commercial basis, it is virtually impossible to sterilize that egg. We can go ahead and sterilize the egg, but it wouldn't be fit for human consumption.

Mr. **Bedell**. Thank you.

Mr. **Olin**. Mr. Volkmer.

Mr. **Volkmer**. Yes, I have a question. It is my understanding, Dr. Liewen—I don't know if you eat at the student union or where you eat, but I understand they have one of these machines at the University of Nebraska and use it in their food service operation. Do you know anything about that?

Dr. **Liewen**. That is a correct statement. I guess I have been questioned on that before. In fact, it is the same machine that we have used to carry out these studies that are currently in progress. I guess I might just make the statement that I have no jurisdiction or authority over the food processing operations at the University of Nebraska.

Mr. **Volkmer**. Right. Thank you very much.

Mr. **Bedell**. Would the gentleman yield?

Mr. **Volkmer**. Yes.

Mr. **Bedell**. Do you eat there, Dr. Liewen?

Dr. **Liewen**. Have I eaten there?

Mr. **Bedell**. Yes.

Dr. **Liewen**. No, I don't. [Laughter.]

Dr. **Stadelman**. Could I comment, sir?

Mr. **Bedell**. Yes.

Dr. **Stadelman**. At Purdue University, first I was told there were two machines, and then a week ago when this survey of the 15 of us who responded was conducted, I was told that there was one machine at the Purdue campus, but I have not been able to find it, and I have checked with food service and the various people around the campus. Someone may have it, but they are sure not using it publicly.

Mr. **Bedell**. So, if you are eating them, you don't know that you are eating them.

Dr. **Stadelman**. Well, I don't eat much at university dining halls anyway.

Dr. **Liewen**. We were all students at one time. We had enough of the food at that time. [Laughter.]

Mr. **Olin**. Dr. Liewen, let me ask you one more question.

Dr. **Liewen**. Certainly.

Mr. **Olin**. You have identified the difference in the amount of coliform and maybe salmonella between the machine method and the hand broken method, but have you correlated that against any data with regard to the human tolerance of the level of contamination that you are picking up?

Dr. LIEWEN. No, I have not correlated that in my study. The level of human tolerance of salmonella is really an area of debate, and it really varies quite widely. Somebody who is immuno-compromised, the young and the old and the infirm, have a much lower tolerance for salmonella than do young and healthy people. There have been documented cases where just a few cells of salmonella have caused illness. There have been other cases where people have been shown to consume probably billions of cells and have not become ill. So, there are a number of factors that will dictate whether or not a person becomes ill from consuming salmonella, depending on the strain of salmonella and the conditions the cells are consumed under. It is very difficult to give a definitive statement on that.

Mr. OLIN. In the final analysis, it is that estimate that really counts in the consideration we are dealing with here, is it not, in that we don't expect to have a total absence of these things in any case.

Dr. LIEWEN. In food products, the tolerance for salmonella is zero.

Mr. OLIN. In food products, the tolerance is zero you say?

Dr. LIEWEN. That is correct.

Mr. OLIN. For salmonella.

Dr. LIEWEN. That is correct.

Mr. OLIN. I see. Dr. Stadelman.

Dr. STADELMAN. Well, the comment I was going to make is with the equipment that was demonstrated and explanation as to the recommendation that the machine be thoroughly sanitized every 4 hours, in a restaurant or bakery, even, it is doubtful that they would break anywhere near, because as they indicate here, they can break 30 dozen every 60 seconds. So, they would run it for a minute to get a 5-gallon pail of eggs for a restaurant, say, and most likely they would not want to, depending on how they operate, but they would most likely want to make 30 or 60 eggs at one time. Then, if they don't clean it at that time and they leave that sit, you are going to get bacterial proliferation within the machine before it is used again.

I have seen this happen with egg washing equipment where the recommendation was that you change the wash water every five baskets of eggs, but they were just picking up and washing dirty eggs and the fifth basket came on Friday. By Friday, they were dipping those eggs into a terrific bacterial soup. Bacteria will double in 15 to 30 minutes with temperatures that you would be likely to encounter in a kitchen.

Mr. OLIN. Could I ask you another question following that line of thought? The FDA undoubtedly tests food at various restaurant locations. They have said they don't have any jurisdiction over the machine, but they check the food. If such a thing were occurring, would it not be likely that the FDA would have picked up contaminated food coming out of these machines showing up in the food chain?

Dr. STADELMAN. Well, yes, if they inspect the liquid egg. I have been in roadside restaurants where they will either have a dozen eggs sitting up on the back of the stove and break them or a bowl of eggs. Here, they would have the bowl of liquid egg apparently sitting there the same way. This would give the bacteria population of that a chance to increase through the day.

If FDA comes in and inspects it, I am sure they would find rather high bacteria loads. But I have no way of knowing whether they are checking eggs. I know that the numbers of restaurants and bakeries is such and the number of FDA inspectors is such that to cover all of them would be pretty much impossible, even with the county health authorities, because usually they don't come in until there is a problem.

Mr. OLIN. Well, we hope to be meeting with the FDA one of these days. We hope to find out.

Dr. LIEWEN. May I make a comment, Mr. Chairman?

Mr. OLIN. Yes, Dr. Liewen.

Dr. LIEWEN. Two points that I would like to make. First of all, the FDA cannot inspect every food product that is on the market. So, in a way, it is just kind of a dice game. The FDA designs statistically valid sampling plans to attempt to test or take a look at a representative sample of food products that are going out. So, they may not necessarily pick up a food product that has a salmonella bacterium in it.

The other point I would like to make is that it has been estimated by competent authorities that there are anywhere from 1 to 10 million cases of salmonella food poisoning that occur in the United States each year. Only a fraction of these are reported to the proper authorities, so it is really very difficult for us to put a finger on the severity of the problem.

Mr. OLIN. Would it be likely that the public health people would have picked this up? I suspect it would be likely.

Dr. LIEWEN. Well, I guess the public health authorities are getting much better at this. A lot of times it comes down to the science of epidemiology, in other words, linking the occurrence of certain symptoms with the consumption of a certain food or the presence at a certain restaurant. It is only by the observations of certain very shrewd epidemiologists, for instance, that the food poisoning outbreak out in California was ever noted. It is very possible this could have gone undetected had there not been some very shrewd investigators.

Again, it almost comes down to chance.

Dr. STADELMAN. May I make one more comment, sir?

Mr. OLIN. Yes, Dr. Stadelman.

Dr. STADELMAN. One of the big differences between the federally inspected plants under USDA and this equipment, in the federally inspected plants, the eggs are washed immediately prior to breaking. Here, they are washed—the eggs may be in market channels for 1 week or 3 weeks. All of this time they are picking up from dust or whatever additional bacteria. There is no washing prior to going into this machine. So, the fact that they are washed and sanitized at this point and then travel through market channels to get the restaurant or bakery or, as I indicated, a quiche operation where they are trying to use the equipment for straight production of frozen quiche, uncooked, which would enter into interstate competition directly.

Mr. OLIN. All right. Gentlemen, thank you very much for your testimony.

Dr. STADELMAN. Thank you, sir.

Dr. LIEWEN. Thank you.

Mr. OLIN. I would like to call the last panel. It consists of Mr. Richard Gohla, executive vice president and secretary of Retail Bakers of America, Hyattsville, MD; Mr. Don McArthur, bakery owner, St. Louis, MO; Mr. Randall James McArthur, president, Missouri Bakers Association, St. Louis, MO; and Mr. Nicholas A. Pyle, Independent Bakers Association, Washington, DC.

We are happy to have you with us, gentlemen. We will take you in that order, and I would like to ask you to confine your oral comments to 5 minutes or less, if you would. Your written testimony will be received into the record in full.

Mr. Gohla, would you like to go first?

STATEMENT OF RICHARD C. GOHLA, EXECUTIVE VICE PRESIDENT AND SECRETARY, RETAIL BAKERS OF AMERICA

Mr. GOHLA. Yes. If I may, could I just make a comment about the subject that was just mentioned?

Mr. OLIN. Certainly.

Mr. GOHLA. It wouldn't be very practical, I am sure, for a retail baker—he suggested that possibly they would run 5 pounds of eggs through and then not clean that machine for a while. I would say in the case of a retail baker—that is who I represent—they would never have a machine for 5 pounds of eggs, much less a retail baker who would take the quantity that he is going to be using for that given day and run them through and then clean the machine. So, I don't know what they do in the schools, but I do know in bakeries that these machines are cleaned right away after their use.

Mr. Chairman, I am pleased to appear before the subcommittee to present my testimony, and I wish to read my statement.

I am appearing at your subcommittee hearing on behalf of Retail Bakers of America Golden Circle Club member and many members of RBA that already own an EggMaster.

Most of the board of directors of our association own this machine and have nothing but praise for it. These bakers are among the leaders in the industry and are always looking for ways to improve the bakery foods they make. The use of fresh ingredients greatly improves any baked product.

Many things cannot be made with frozen pasteurized eggs without the quality suffering tremendously: egg bread, cream puffs, eclairs, sponge cakes, chiffon cakes, all types of layer cakes, to name just a few. The higher the percentage of eggs in a product, the more the quality suffers by using frozen eggs. Our members can only survive by making the best baked foods it is possible to make, and this can't be done by using eggs that by no stretch of the imagination can be equal to the USDA graded eggs that are sold to the housewives in this country. If these frozen eggs they want to force the bakers to use are so good, why aren't they sold in the supermarkets?

The USDA and State health departments will not permit the sale of any eggs of the low quality that are broken at a processing plant. A business is prohibited from buying them unless they are an egg plant. The USDA assures us that a grade B or better egg are of the quality to be sold at the stores for use at home. It has been washed, sterilized, and candled which, if done properly, should assure us of a product using the Egg Master that is clean, sterile, and wholesome.

This machine has proven itself for 4 years in hundreds of bakeries to produce a very superior product without any problem. This unblemished record makes it very hard for us to understand the on-again, off-again attitude taken by many people of the USDA other than that it is caused by pressure being brought to bear by the frozen and powdered egg producers. The issue is not one of health but rather of economics.

Of the concerns that have been raised and circulated about the Egg Master by people in the egg processing industry, none have proven to have any foundation whatsoever.

There has never been a new machine made available to the baking industry that has been made to pass the tests and given the scrutiny the Egg Master has had, but then nothing has ever disturbed a major market like the Egg Master. Eggs account for one of the four top ingredient expenses in the baking industry. Of flour, sugar, eggs, and shortening, they vary depending on the products that are being made, but for a cake baker, there are more dollars' worth of eggs in a cake than there are flour, sugar, or shortening.

For example, for 45 pounds of eggs, the frozen eggs are $26.32 and with the Egg Master, only $15.75.

Everyone is aware of the farmers' plight in the wheat, sugar, soybean, and vegetable oil markets. It is said that the bakers are the farmers' best customers. This also holds true for the egg farmers. Many good eggs go to the processors to fill the demand for the tremendous amount of eggs needed. But breaker stock is sold for much less than first quality eggs. Wouldn't the farmer be better off selling these good eggs to the egg packers at the higher price for sale directly to the bakers?

Since 1 dozen eggs produces well over 1 pound of liquid eggs, and by watching the price related to the different size eggs, a baker can save an average of 20 cents per pound or about 35 cents average cost for fresh eggs versus 55 cents average for frozen. And this is in the major market areas. In some of the smaller cities not close to processors, the price can be 90 cents per pound or higher, but fresh eggs still sell for the same as in the major markets. These bakeries have saved as much as 60 to 70 cents a pound.

There is no way to break several hundred pounds of eggs by hand, and these people were forced to pay whatever price they had to pay just to get delivery. The Egg Master machine now allows them to economically produce their own fresh eggs right on the premises. Fresh eggs go directly from refrigeration through the machine and back to refrigeration in a matter of minutes, thus reducing the possibility of cross contamination that could result in handling by humans.

There is a great need for this piece of equipment in the baking industry from a quality and labor savings or price advantage over frozen eggs, but many bakers are reluctant to go buy it because of all the stories and rumors about its being banned by the USDA and local health departments.

Much has been said about salmonella. This problem does not exist. Liquid eggs produced by bakers as an ingredient in baked foods is baked at temperatures far in excess of what is required for pasteurization. It is an accepted fact that baking kills salmonella.

We ask you to give this machine your consideration for acceptance using the same guidelines used on other new equipment. It is constructed so as to be easily cleaned and sanitized and will produce a product that is sanitary and wholesome.

I would just like to make one other comment. There has been something said here about the baking industry's Sanitation Standards Committee. We have been in the baking industry for 38 years. I have served on the board of the baking industry's Sanitation Standards Committee for 18 years. Basically, our job in the baking industry's Standards Committee is really not to set compliances and this stuff. We are interested only in whether there is cleaning accessibility to machines and this type of thing and whether it is smooth and all of these types of things. We have nothing to do about the product when it goes into the bakery.

Thank you, sir.

[The prepared statement of Mr. Gohla follows:]

Retail Bakers of America
Presidential Building – Suite 250, 6525 Belcrest Road, Hyattsville, Maryland 20782 (301) 277-0990

November 19, 1985

The Honorable Tony Coelho
House of Representatives
Chairman Subcommittee on Livestock, Dairy & Poultry
Attention: Courtney Pastrick
1430 Longworth House Office Building
Washington, DC 20515

Dear Mr. Coelho:

I will be appearing at your Subcommittee hearing on November 21st on behalf of a Retail Bakers of America Golden Circle Club member and many members of RBA that already own an Egg Master, and many more that will purchase the machine in the future.

Most of the Board of Directors of our Association own this machine and have nothing but praise for it. These bakers are among the leaders in our industry and are always looking for ways to improve the bakery foods they make. The use of fresh ingredients greatly improves any baked product.

Many things can not be made with frozen pasteurized eggs, without the quality suffering tremendously. Egg bread, cream puffs, eclairs, sponge cakes, chiffon cakes, all types of layer cakes, to name just a few. The higher the percentage of eggs in a product the more the quality suffers by using frozen eggs. Our members can only survive by making the best baked foods it is possible to make, and this can't be done by using eggs that by no stretch of the imagination can be equal to the USDA Graded eggs that are sold to the housewives in this country. If these frozen eggs they want to force the bakers to use are so good why aren't they sold in the supermarkets?

The USDA and State Health Departments will not permit the sale of any eggs of the low quality that are broken at a processing plant. A business is prohibited from buying them unless they are an egg plant. The USDA assures us that a grade B or better egg are of the quality to be sold at the stores for use at home. It has been washed, sterilized, and candled, which if done properly should assure us of a product (using the Egg Master) that is clean, sterile and wholesome.

This machine has proven itself for four years in hundreds of bakeries and other food plants including USDA meat and poultry plants, to produce a very superior product without any problems.

This unblemished record makes it very hard for us to understand the on-again off-again attitude taken by many people in the USDA, other than it being caused by pressure being brought to bear by the frozen and powdered egg producers. The issue is not one of health, but rather one of economics.

Of all the innuendos, slurs, etc. that have been circulated about the Egg Master, by people in the egg processing industry, none have proven to have any foundation whatever.

There has never been a new machine made available to the Baking Industry that has been made to pass the tests and given the scrutiny the Egg Master has had. But then nothing has ever disturbed a major market like the Egg Master. Eggs account for one of the four top ingredient expenses in the Baking Industry. Of flour, sugar, eggs and shortening they vary depending on the products that are being made, but for a cake baker there are more dollars worth of eggs in a cake than there are flour, sugar, or shortening.

EXAMPLE:

	Frozen Eggs		With Egg Master	
45 lbs. eggs	@ .58½	$26.32	@ .35	$15.75
62½ lbs. sugar	@ .30	18.75		
50 lbs. flour	@ .18	9.00		
35 lbs. shortening	@ .46	16.10		

Everyone is aware of the farmers plight in the wheat, sugar, soy-bean and vegetable oil markets. It is said that the bakers are the farmers best customers. This also holds true for the egg farmers. Many good eggs go to the processors to fill the demand for the tremendous amount of eggs needed. But Breaker stock is sold for much less than first quality eggs. Wouldn't the farmer be better off selling these good eggs to the egg packers at the higher price for sale directly to the bakers?

Since one dozen eggs produces well over one pound of liquid eggs and by watching the price related to the different size eggs a baker can save an average of 20 cents per pound or about 35 cents average cost for fresh eggs vs 55 cents average for frozen. And this is in the major market areas. In some of the smaller cities not close to processors, the price can be 90 cents per pound or higher. But fresh eggs still sell for the same as in the major markets. These bakeries have saved as much as 60 to 70 cents per pound.

There is no way to break several hundred pounds of eggs by hand and these people were forced to pay whatever price they had to just to get delivery. The Egg Master machine now allows them to economically produce their own fresh eggs right on the premises. Fresh eggs go directly from refrigeration, through the machine, and back to refrigeration in a matter of minutes, thus reducing the possibility of cross contamination that could result in handling by humans.

November 19, 1985
The Honorable Tony Coelho
page 3 of 3

There is a great need for this piece of equipment in the baking industry from a quality and labor savings or price advantage over frozen eggs. But many bakers are reluctant to buy it because of all the stories and rumors about it being banned by the USDA and local Health Departments.

Much has been said about salmonella. This problem does not exist. Liquid eggs produced by bakers as an ingredient in baked foods is baked at temperatures far in excess of that which is required for pasteurization. It is an accepted fact that baking kills salmonella.

We ask you to give this machine your consideration for acceptance using the same guidelines used on other new equipment. Is it constructed as to be easily cleaned and sanitized and will it produce a product that is sanitary and wholesome?

Sincerely,

R C Gohla

Richard C. Gohla
Executive Vice President
and Secretary

RCG/dg

Mr. Olin. Thank you.

Mr. Don McArthur is next. You have quite an interesting story. I had a chance to read through it when I was sitting through some of the earlier testimony. I am sure you will have to shorten that story a little bit. Go ahead.

STATEMENT OF DON McARTHUR, BAKERY OWNER, ST. LOUIS, MO

Mr. Don McArthur. My name is Don McArthur, and I am pleased to appear before this subcommittee. I wish that my statement would be read into the public record, and I intend to shorten it very much trying to accomplish our 5-minute limit that we have.

Mr. Olin. Well, it is a very interesting story. It is worth reading. But you only have 5 minutes now.

Mr. Don McArthur. All right, but first I would like to answer one question brought up by the UEP people, and it was in answer to one of their statements. What this is is out of a little Orange County, CA Register article, and it was addressed to Marilyn Batchelor of the Register. What it says is Abby Sutherland, legislative director for the United Egg Producers, said the company's board will continue to pursue getting the machine outlawed even if it is given a clean bill of health from USDA and the FDA.

With that type of an attitude, I don't know how much small people like us—what chance we have.

I have owned a retail bakery in St. Louis, MO, and I have been in the baking industry since I was 13 years old. I purchased my first bakery when I was 23 years old. We now do about 20 times the value we did in that first year. This growth saw over 500 retail bakers go out of business in the St. Louis area. The reason these bakeries went out of business was because their customers didn't like their products. That is directly related to the quality of ingredients we use in our products.

A retail baker is a very small area to draw customers from, a few square blocks surrounding his bakery. Our products have to be so fresh and desirable that we get customers to come back a couple of times a week and pass all the things at their fingertips on the supermarkets shelves. Surprisingly, it is an easy thing to do. Just make it the best you can, and if you don't enjoy eating it yourself and are proud to say you made it, don't put it in the store.

No small businessman wants to spend $3,000 for a machine and add another job that needs to be attended to if he doesn't have to. No one else needs a law passed by the Congress of the United States to force me to use their products. It is impossible to know in a bakery how many eggs we will need 7 or 8 days in advance, and that is how long it takes to thaw these eggs. Then they tell me they have to be used within 24 hours of the time they are thawed.

Gentlemen, I am a baker, not a magician or a psychic. In my 40 years in a bakery, I have probably had every experience you could have with an egg.

The bakers are the farmers' best customers, and this includes the egg farmers. Our business is primarily cakes and dessert items. It is our largest single expenditure for ingredients. Even the frozen egg processors cite tests that prove liquid eggs which they now sell make better products than the frozen. You can't make many of the bakery items with pasteurized liquid eggs, let along the pasteurized frozen.

My machine freed me from hand breaking eggs. It also freed me from buying garbage eggs that sometimes I couldn't smell and couldn't stand the smell of long enough to get them stirred up. We hand cracked most of our eggs until August 1982 when we first came upon the Egg Master. No one touches the eggs, and they are broken so fast they don't even warm up.

I hadn't seen a bad egg in our bakery for over 10 years, so I wasn't concerned about getting a bad egg dumped into that Egg Master, and even if I did get one in there, I would smell it as soon as it hit that machine. I would put the lid on the bucket and I would return it to the guy who sold me the eggs. I couldn't do that with a frozen product. If somebody gets sick in our bakery on our products, they won't blame the egg processors. Like another guy from Missouri, the buck stops here at our store.

With this, I feel that I am more capable of inspecting my eggs that are used in my bakery than any employee hired in any egg plant anywhere in the country who has no vested interest in that function whatsoever, especially when they are passing his eyes at seven eggs per second.

Gentlemen, what in the world can be wrong with breaking my eggs a few feet from my mixer in a facility that is inspected regularly by our local health departments? Our customers are invited to tour at any time. We are proud of our bakery and the way we do things. I want the right to use the same eggs that your wife serves for breakfast in the morning.

The whole reason we are here is a whole lot of money, billions of dollars every year in the egg industry. I can buy the same egg a lot cheaper and a better quality by using my machine.

The pasteurizing of eggs is needed only when we are breaking hazardous eggs such as the egg processors use. This process came about because of the need for a market for all of the surplus and damaged eggs. It is the only way to make them safe for human consumption, because of the long period between breaking and final use of eggs that are almost certain to have been contaminated.

Pasteurization is not necessary with the Egg Master because the fresh egg is practically sterile until it is removed from the shell. Then it is super pasteurized in the baking or cooking process a few minutes or hours later.

Gentlemen, if you ban this machine, you would have to ban every machine in my bakery, because there is nothing in that bakery that the eggs out of this machine does not come into contact with in a raw state before it is baked, mixed in my batters and doughs and every item I make.

Now, the bakery business has one of the lowest insurance costs for product liability of any industry in the country. I do not know in all of my 40 years' experience of any instance that salmonella was ever transmitted from a baked product. So, please, take a look at the machine very carefully before we do anything on this law.

[The prepared statement of Mr. Don McArthur follows:]

Honerable Tony Coelho
U.S. House of Represenatives
Chairman Sub Committee on
Livestock Dairy & Poultry
Room 1301
Longworth Bldg.
Washington, D.C. 20515

Dear Mr. Chairman:

I am Don McArthur, a retail bakery owner from St. Louis, Mo. I have been in the baking industry since I was 13 years old. I purchased my bakery in 1956 at the age of 23 and we now do 20 times the volume we did that first year. This growth happened in a period that saw over 500 retail bakeries go out of business in the St. Louis area. There were only 30 left out of over 600 at that time. This growth happened because of only one reason, not because of all the bakeries that closed, they closed because their customers didn't like the quality and tast of their products. We had to live down their bad image. How many of you will not buy a cherry pie, a fruit cake or donut because you don't like them. You don't like them because of a bad experience you have had with a low quality product made with cheap ingredients. The reason our business has grown is we will use only the very best ingredients we can buy. The freshest best tasting eggs, butter, milk, creams, fruit, nuts, shortenings, sugars and flour. The price of these items is secondary to their quality. You will not remember if you paid $3.29 or $3.89 for that cake, but you will sure remember that you threw most of it away because it was no good.

A retail baker relys on a very small area for his customers, a few square blocks surrounding his bakery. Our products have to be so fresh and desireable that the customers will pass the bakery counters in the supermarkets, not buy the aisle after aisle of commercial cakes, pies, cookies, and box mixes that are at their finger tips. We have to entice them to make that extra trip to the bakery and do it several times a week.

Surprisingly it is a very easy thing to do. Just make it the very best you can. If you don't enjoy eating it yourself and are not proud to say it came from your bakery, don't sell it in your store.

If the processors of frozen eggs followed these simple guidelines we wouldn't be here today. But no they want to use the very lowest quality egg they can buy, which is so bad a federal law prohibits their sale to anyone that doesn't have a USDA inspector on the premises at all times. The USDA must supervise the special handling these eggs require to be made safe for human consumption.

Then because the egg processors have been given virtual monopoly by this same law and its interpretation, that they now want you to change the law to include the same special handling requirement for the best quality eggs that are available. Why? Because if you dont they can no longer sell me this low quality egg at a price that is 50% more than the price of the very best. The price of eggs this week in St. Louis is 68 cents a dozen for fresh eggs or a cost of 45 cents a pound. The cost of frozen eggs is 67 cents a pound or 22 cents a pound more for the frozen. The breaker stock is 48 cents a dozen this week for a cost of 32 cents a pound and a selling price of 67 cents a pound or 200% of their cost. This is not selling the very best at the lowest possible price as we have to do. No small business man wants to spend three thousand dollars for a machine and add another job that needs to be attended to if he doesnt have to.

I dont want to milk my own cow, mill my flour, make my shortening or process my sugar. Im very satisfied with the quality of all the hundreds of different ingredients we use in our bakery. Why cant I be just as happy with the eggs?

No one else needs a law passed by the Congress of the United States to force me to use their product and force it will have to be. When I remove the lid from a can of frozen eggs and see this red liquid (that I know is blood) floating on top of this curdled mass that resembles orange cottage cheese more than it does eggs, Im told I must mix this mass well with a whip to get suspension at the top and bottom of the can and you will get different results. (They mean ruin your mixes) This wouldnt be too bad if all you had to do was dip the blood off the top of the orange cottage cheese but most of the time you cant mix them too well because of the smell and you are in a hurry to get your nose away from the can. Now dont complain about the smell because they will tell you you didnt thaw them correctly. It couldnt have been anything wrong with their eggs.

The frozen egg processors would like you to believe that the bakers, their customers, are too stupid to follow the simple directions on the egg machine.

Use only USDA sanitized eggs Grade B or better.
(It is already against the law to sell or buy any other kind)
Visuall inspect eggs for dirt or broken shell
(Common sanitary practice even for hand breaking)
Use liquid egg mixture only in products to be cooked or baked for at least 3.5 minutes at temperatures of 140°F or higher.
(all baked products are baked for much longer periods at much higher temperatures than these requirements or they are still in a dough or liquid state. This is only the required pasturization time and temperature.)
The liquid egg product must be kept refrigerated.
(already covered by all health dept. rules Federal & State & Local for all egg products except dried)
For use in uncooked end products use pasturized eggs or hand crack your eggs.
(according to NSF and other health standards use only fresh hand cracked eggs not pasturized. They could have been recontaminated)
At the end of each cracking period or four hours, clean machine as per instruction manual.
(Common sanitary practice)

These are the very simple instructions to be used when thawing frozen eggs, thaw under refrigeration or cold running water. Anyone should be able to follow such simple instructions, even us stupid bakers that are trying to poision all our customers.

The frozen eggs processors are right, I must be stupid because after 30 years I still cant tell you how many eggs Im going to need thawed 7 to 8 days in advance and that's how long it takes to thaw them under refrigeration. But then I can always thaw a few cans under cold running water, that only takes 48 to 72 hours depending on how cold the water is. It is a lot faster this way, but I have another problem, Im not smart enough to figure out how to wash all my dirty pans and utensils when my sink is full of frozen eggs. I guess the frozen egg salesman will tell me I should use my dirty pans over again with out washing them, as it would be more sanitary than thawing my eggs at room temperature. Since I dont think I would believe this is a very logical solution I could always invent an egg thawing machine. (I have several patents on ogher bakery machines I have invented.) There should be a lot of my fellow stupid bakers that would pay a lot of money for an egg thawing machine. How else can we have the honor of using this orange mass that looks like cottage cheese with blood on top, if we dont own an egg thawing machine. It's impossible to know in a bakery how many eggs we will need thawed 2 or 3 days in advance, let alone 7 to 8 days. Then they tell us thawed eggs should be used within 24 hours of thawing.

Gentleman, I am a baker not a magician or psychic. In my 40 years in a bakery I have had probably every experience you could have with an egg. The bakers are the farmers best customer and that includes the egg farmers. Our business is primarily cakes, dessert items, and sweet goods. We use more dollars of eggs per year than sugar and flour combined. It is our largest single expendature for ingredients.

I certainly dont need a professor telling me about some test that was done under conditions he controlled. All I know is if you put garbage into something else all you have is more garbage.

When I first started working in a bakery in 1946, one of my jobs along with cleaning the bakery, was breaking eggs. I prefered the cleaning. If I could have gotten another job at that age I would have quit rather than break them. They were nest run eggs. The shells were filthy. Some of them had been scratched under the straw and recovered a month or two later. A skunk has a pleasant odor compared to some of these eggs. But we broke 6 eggs into a small cup. When you got a bad egg you dumped whatever was in the cup down the sewer and washed the cup. If you dumped the bad eggs into the bucket and ruined the whold bucket you would have been fired. If they had gotten into a cake mix and ruined it I was afraid of great bodily harm, so I was very careful. During the next few years frozen eggs became more the egg bakers would use in their doughs and cookies, while still breaking fresh eggs for their cakes. The frozen eggs will not give you the volume, texture, aroma, and taste you get from a fresh egg. These are all those hard to define things that we call quality in our products. Even the frozen egg processors cite test that prove liquid eggs (which they now sell) give much better results than frozen in all baked products. This is something we bakers have known for years. But what happens to all the small bakers in areas not close to a processing plant. These eggs are not available to them, which includes a city the size of St. Louis. Where are they available? New York-Chicago- Los Angeles. How about the rest of the country. And what happened to the use them within 24 hours after breaking or thawing? That rule no longer suits the processors so now we ignore it. I can order a weeks supply of liquid eggs that are a few days old before I get them. So they will be maybe 2 weeks old before they are all used. Why is this now acceptable?

You cant make many of the items in a bakery with pasturized liquid eggs, let alone pasturized frozen eggs. Every process that the egg is put thru damages it to some degree. Every day it is out of its shell it deteriorates in quality. First they heat the egg to 140° to pasturize it. You should have seen the eggs in 1972 when they tried to do it at 150°. You cant use cooked eggs in bakery goods and millions of dollars in baked goods were ruined trying. No one bothered to consult the bakers. Even today, egg whites occasionally get pasturized at too high a temperature and an angel cake mix looks like it was made by the devil himself. Then after the eggs are heated it is put into cans to be frozen which takes 72 hours in the freezer to freeze it. Then it is shipped all over the country and abused in god knows how many ways on trucks, loading docks, freezers and warehouses. I know of instances that a driver arrived too late on friday to be unloaded and the eggs would sit all weekend on a dock. Then be refrozen and delivered to the bakers who then wondered why they had problems.

Now it takes 7 days to thaw the frozen eggs. That means the eggs are a minium of 10 days old in just the freezing and thawing process. And you hope that they didn't have any other problems.

It is impossible to make sponge cake, chiffon cake, lady fingers, cream puffs and eclairs with pasturized eggs. If you dont use fresh cracked eggs dont bother trying. You will just loose customers if you sell them.

In 1972 we were told by the health departments, we could no longer use any eggs that weren't pasturized. This meant we could no longer break our own fresh eggs, even by hand. During this period we really had some problems. Our cakes had big holes in them. They had no volume and were very heavy. They would rise in the oven only to sink back. Many times we had to throw away several batches of cake because of the odor of bad eggs. You should cut a cake that has been enrobed with icing and set in the store a few hours with a bad egg in the batch. You will never eat it because you cant get past the smell. If these eggs were inspected and broken the way the law and regulations read there is no possible way this could happen, But it did and still does.

This was my first contact with the egg inspection act. I got a copy of the act and asked my inspector to show me where it said I couldn't break my own eggs. He agreed as long as I used USDA eggs there was no problem.

We hand cracked most of our eggs until August of 1982 when I first came upon the Egg Master. It was a dream come true. Now I could crack my eggs in a more sanitary way and much faster than by hand. No one touches the eggs and they are broken so fast they dont even warm up. I hadn't seen a bad egg in over 10 years of hand breaking eggs so this was of no concern, even if we did get a bad egg you would smell it as soon as it hit the machine and I could return the whole bucket to my egg supplier for credit. Which I couldn't do with frozen eggs, they would tell me it couldn't happen, Or it was my fault. We are not about to let a bad egg get into our products, A 45 pound bucket of eggs costs about $15.00 out of the machine, and it could ruin several hundren dollars worth of merchandise.

No one is going to add bad eggs into his sugar, shortening, flour and other ingredients, then spend a half hour carefully mixing the cake, greasing several hundred clean cake pans, carefully weighing the proper amount of cake batter into each pan, baking each layer to perfection. Then mixing several different types of icings for the 2 or 3 hundred cakes. Spending the time to carefully ice all these cakes. Then put them onto an expensive doilly with our name (which we are proud of) printed on it. And spend the countless hours to draw pictures, portraits, scenes, cut and sculpture, many different animals and toys, insignias, then decorate and deliver the huge wedding cakes. There will be about four thousand people served a piece of cake from this one mix, at many different partys and receptions. The egg processors would like you to believe we bakers are stupid enough to do all this while knowing there was a bad egg in the very first step of making a cake, which is breaking the eggs.

If someone were to get sick on our products (which hasn't happen in 40 years) our bakery would be the one to get all the bad publicity. The egg processors can pass the buck. But in our case like another fellow from Missouri the buck stops here for our customers

I want to break the same eggs your wife serves your family every morning. And I want to do it right in my bakery. That way if I was to someday get a bad egg in my top quality eggs (which according to the USDA can't happen) I could return the whole bucket or throw it away. If the egg processors get a bad egg its mixed into a 20,000 gallon tank before anyone can stop it. Of course a few bad eggs in a 20,000 gallon tank only makes them smell a little bad. But then they will have plenty of time to ripen some more before they are used.

Gentleman, what in the world can be wrong with breaking my eggs a few feet from my mixer, in a facility that is inspected regularly by our local health departments. And our customers are invited to tour it at any time. We are proud of our bakery and the way we do things.

Let me share a tour of a USDA inspected egg processing plant with you. I think you will understand why I want to use my Egg Master and fresh eggs. A friend of mine, a very large user of eggs in St. Louis was invited to take a tour of the plant to see how the fresh eggs are cleaned and graded for the supermarkets, restaurants, and other institutions and he took me along. It was very impressive. The eggs are gathered on conveyors right from the chickens in the laying house (which we toured). They are partially inspected and the very dirty or cracked eggs separated from the rest at the laying house. They are then transferred to the plant where they are loaded onto conveyors that wash each egg with brushes, rinse the eggs, then sanitize them in a sanitizing solution. Then they are sprayed with oil to seal the shell. Next they go into a dark chamber where powerful lights are under the conveyor shining through the egg shell. An inspector is on each side of the conveyor so they can inspect the eggs from all angles. Any cracks, blood spots or other imperfections show up very well and these eggs are removed. Next the eggs are separated by machine according to size, and then are separated for Grading and packed into containers. These eggs are kept cool from the time they leave the conveyors at the laying house until they are delivered to the customers.

This process is very well run. Is it because there is no passing the buck? If there is a problem it can be traced directly to its source, no one else has handled the eggs except the egg plant. A bad egg going thru, no way. They certainly wouldn't want your wife to get it. These eggs are only 24 to 48 hours old when they reach the supermarket.

I would only have one suggestion to improve the process. The wash water is only 20 degress warmer than the eggs themselves. While we were there they took a break and stopped the line. The heaters in the wash water raised its temperature to 150 degrees. I asked if this high temperature would affect the eggs that would be washed when the line started up. I was assured it would only heat the shell not the egg interior. Since salmonilla on the shell seems to be the only concern of the egg processors why dont they wash the eggs at 145 to 150 which is hotter than is needed to kill salmonilla, or would this add to their costs to the degree that they are not that concerned about the public health. If 140 degrees doesn't affect the eggs they pasturize it shouldn't bother their fresh eggs that are still in the shell.

After touring the cleaning and grading portion of the plant, we passed through the area where the trucks unload the eggs coming in. There are no screens and the blowers to keep the flys out are very ineffective. It was a hot day and there were enough flys in the whole area that you couldn't hardly see the florescent bulbs thru the plastic shields because of the dead flys laying on the shields.

Eggs were stacked all over the room. But they were the nest run or breaker stock. They included the dirty eggs which I dont need to explain, the checks or cracks (its hard to tell the difference). There is not supposed to be any leakers But I dont know what makes so many of them stick to the shell liners. The blood or meat spots which were rejected from the other room, I assume there were no inedables, there is not supposed to be. We were told these eggs would be left sitting out overnight to warm to room temperature. If they are cold when they are broken, too much of the egg white clings to the shell and there is too much waste. Next we went to the other side of the same room where they were breaking the eggs for that day. There was another loading door with no screen about 10 feet from the start of the breaking line.

We were informed that this breaking machine broke 7 eggs a second. The washing, rinsing and sanitizing process was essentially the same as in the other room. But the eggs were not oiled as they were to be broken immediately. And I do mean immediately. They went through a very short candle operation with only one inspector not 2 as in the other room. Now remember these are not the same quality eggs packed for retail sales but everything that cant even be sold to anyone except the processors. You & I cant buy them and wouldn't want to. There should be 4 or more inspectors on this line. You cant even see 7 eggs a second let alone do any thing to stop them. Because the eggs are so dirty the washing leaves a lot to be desired. We now have a lot of soft wet dirt instead of dry dirt, clinging to the shells.

The eggs have only traveled about 3 feet at great speed since they left the washer and sanitizer before they go into the breaker. According to the law the eggs can be moist but not wet at this point. These eggs were still dripping water and sanitizer at a pretty good rate and it will all end up in the egg liquid. As the eggs are mechanically broken one inspector is supposed to visually inspect and smell each egg, they know there is a lot of bad eggs or they wouldn't be in this room. If a bad egg passes the inspector it is to be removed by the inspector, cup and all and a new cup inserted to replace the one removed. If a bloody egg passes the inspector the same inspector is to remove the blood or meat spot with a spoon, and at the rate of 7 eggs a second that means the inspector has one seventh of a second to perform these functions, or its all history. The bad egg is already in the trough and gone into the 20,000 gallon tank. Meanwhile how many eggs would go uninspected while the inspector is trying to do his job with one bad egg. Consequently the inspector feels like a person trying to dip the atlantic ocean dry with a tea cup. Whats the use. So he will just sit there not really seeing, and watch the eggs go by. Besides if he reached up to do anything and got a finger in the machine it could tear his finger off.

The machine drops a lot of the egg shell into the liquid. I dont know how much but the USDA inspectors should have the percentage. I would guess at least 10%. Thats about how much we would drop in when we were hand breaking and would have to strain it to get it out of the liquid. I do know that the 3 strainers at the egg plant were so full that they were no longer straining the shell from the liquid. The eggs were pumped into the center of the strainers, which were larger than our whole machine, and the eggs were pouring out over the top of the strainer because they were completly full of egg shells.

I would suggest they use an Egg Master for this job. Its certainly a lot better way than they are doing it.

The egg processors say that their main objection to the egg master is that it passes the liquid egg over the shell and it does. But each 30 dozen or one case of eggs, you have to empty it of all shells, or the machine gets out of balance and will not accept any more eggs. This mean eggs from the Egg Master have passed over the shells of from 0 to a maxium of 30 doz. shells, and they are clean shells. What I saw at the egg plant I would have no way of guessing how many eggs the shell came from. But there were many times more in each strainer than our machine would hold, and they were not emptied in the half hour we watched the operation. I dont care if it was the shells of a thousand dozen eggs, it was still more shells than an Egg Master will hold and the egg liquid was passing over or through them and they weren't very clean shells either.

We were told that the egg liquid would be pumped from the large holding tank when it was full (they didnt say how many days that would take) into a tank truck to be shipped to Wisconsin for pasturizing and packing into cans for freezing.

When you freeze an egg you have to add 10% sugar or sugar syrup to the egg to prevent the gelatinization of the egg yolk, If you didnt the eggs would be like a big bowl of jello. But now I have a mix that needs 17 pounds 10 oz. of eggs so lets see, I will have to take 10% of 27 lbs 10 oz. because that's sugar so I multiply 27 pounds by 16 oz. thats 432 ozs. plus 10 ozs. thats 443 ounces and 10% of that is 44.2 ounces + 442 ounces thats 486.2 ounces divided by 16 ounces to the pound. Thats 30.38 pounds and 38 hundreths of a pound is 16 multiplied by .38 + 6 ounces so I need to weigh 30# 6 ounces of eggs instead of 27 pounds 10 ounces. But wait a minute, how about all that water I saw dripping into the liquid. It should be at leastanother 3% that isn't very much but I better add 3% more eggs and substract3% from my water, 3% of 30 pounds 6 oz. is another 14½ ounces so I will need 31 pounds 4½ ounces of eggs to get the same results as 27 pounds 10 ounces of fresh eggs. But now I have to substract 14½ ounces from my water in the mix. How much will that be? And also I better refigure my sugar or I will have too much sugar and the cakes will all fall in the oven. I will stop these mathmatics here so as not to bore you with it. But I would have to do this on 50 or 60 mixes every day, or we would be just another bakery that went out ot business because our products weren't like they used to be.

I could cite many more reasons why this whole thing is rediculous, but the whole reason we are here is a whole lot of money. Billions of dollars every year in the egg industry. I can buy the same egg you buy in the supermarket, the very best for an average of 55 to 60 cents a dozen or 36 to 40 cents per pound. The frozen pasturized eggs will cost me 55 to 60 cent per pound. Bakers not in a large metropolitan area pay the same as I do for fresh eggs. But some I know have to pay as much as 90 cents per pound for frozen pasturized. The egg processors pay about 30 cents a dozen for breaker stock which gives them a cost of about 20 cents a pound. Why are their frozen eggs so high priced?

Why would anyone pay 55, 60 or more cents per pound for an inferior egg when they can have the very best for 35 to 40 cents per pound?

Many bakers have payed for their Egg Master in a few days. Many in a few weeks, very few take over a year. But this is where the egg processors have their big objection to the Egg Master. Once anyone buys the machine they lose a customer forever. He will never buy frozen eggs again. Several places own 2 machines, one is a back up in case there is a problem, they wont have to use frozen eggs.

The pasturizing of eggs is needed only when you are breaking hazardous eggs such as the egg processors use. This process came about because of the need of a market for all the surplus and damaged eggs. It is the only way to make them safe for human consumption because of the long period between breaking and final use of eggs that are almost certin to have been contaminated.

Pasturization is not necessary with the egg master because a fresh egg is practically sterile until it is removed from the shell. Then it is super pasturized in the baking or cooking process.

The Egg Master is just a better mouse trap.

Sincerly,

Don McArthur

Mr. Olin. Thank you.

Mr. Randall McArthur.

STATEMENT OF RANDALL McARTHUR, PRESIDENT, MASTER RETAIL BAKERS OF ST. LOUIS AND MISSOURI BAKERS ASSOCIATION

Mr. Randall McArthur. Thank you very much, Mr. Chairman. I am pleased to be here today. I would ask that my written text be included in the proceedings in their entirety.

Mr. Olin. So ordered.

Mr. Randall McArthur. Thank you.

I am, as I said, Randall McArthur. I am a second generation bakery owner from St. Louis, MO, and I am now the current president of the Missouri Bakers Association as well as the Master Retail Bakers of St. Louis. These are both two local trade associations, and I represent bakers from all across the State of Missouri and our St. Louis group represents some from southern Illinois, probably about 70 bakeries between the two associations.

If you knew all the answers to all the questions when you came in here today, I am sure you are going to be confused when you walk out. I know I have heard conflicting things said on a lot of different issues.

In all the time I have been working with inspection agencies, I have found that usually we want to be inspected by more than one agency and we have to try to get them off our back, and now we have two agencies trying to fight over which one shouldn't be inspecting us, and in this instance neither wants to inspect the machine. I find that rather amusing in a world where we are overregulated.

However, the issue in just my perspective, we have to comply in our bake shops with the FDA model ordinance. All of the members of my association, anyone who runs a bakery in St. Louis City or County, we have to live up to the FDA model ordinance as well as take a basic sanitation course and be approved in that, so we have somewhat basic knowledge of bacteria and sanitation and the temperatures that are required to prohibit growth of bacteria in a certain time frame. We are all proud of the fact that we take these, because we do want to make our products safe for the consumer, and we don't want to poison anyone.

In this ordinance, the FDA covers equipment by saying that our local health department standards have to be equal to or in excess of that of the FDA. Generally, the FDA recognizes the NSF standard as the acceptable practice for approving equipment. It has to be NSF approved or equivalent. All of the equipment in our bakery has to be rated that way or we are not allowed to use it.

So, I would welcome independent tests on the Egg Master from an association such as NSF without the help of Mr. Maynard or with the Egg Producers to let someone do that on their own to really determine the feasibility and the cleanability and the salability of the eggs that come out of this machine. Personally, I don't feel there is anything wrong with them.

I grew up as a baker's son. I cracked a lot of eggs. It has been said that some of the laboratory tests that were done the hand cracked eggs showed up with no salmonella. Now, I don't know if those were done under laboratory conditions or if they were done under shop conditions. I think that is one thing we need to analyze when we take a test, because remember people don't use these machines nor do they crack eggs in a laboratory. They crack them in their bakery. They crack them in their restaurant. So, we have to be accurate in how we guage this.

Many people who will crack eggs—it is not a very nice job, and you don't pay a lot of attention to what you do. So, when you are cracking them by hand, you get to where you go pretty fast. Sometimes egg shells fall down into the liquid you are using. You crack it into a quart measure or a gallon measure, and I have seen people go down and get the egg out with their hands. God forbid that they have a cut or something on their hand or that they sneeze.

We did a few tests. We warmed up our eggs about 10 degrees when we cracked a gallon measure full. Now, remember they are sitting out from the ice box in a case or so and sweating and we are cracking them, and we warm them up about 10 degrees. Then we pour them into a plastic bucket. We fill a 5 gallon bucket up and put it in the ice box.

So, after you go through the hand cracking operation, you have probably warmed the eggs up above the 45 degree level where bacteria can multiply. How much I don't know. I am not a microbiologist. But when we do use the egg machine, it takes approximately 30 to 40 seconds to crack 15 dozen. It might take us a minute to crack the whole bucket full. Then we will stop. We will take that bucket and we will put it into the ice box, and then we will clean the machine out, the shells in the machine.

That process we checked. Our ice box temperature when we checked was 36 degrees. The interior temperature of the egg was 38 degrees. The temperature of the whole 5 gallon bucket after we cracked it as you saw the machine done was 41 degrees. So, we warmed this egg up very little and then we put it back in the ice box.

Now, we figured out how much egg poundage we need to use each day. That is how many dozen we crack so that we can use all that we need. Our production is set up so that we use the eggs within a period of 4 to 5 hours even if they are in refrigeration.

I would add that in a bakery—I checked a lot of our products, especially some of the things that you would think we bake to a lesser temperature, such as custard pies which would be comparable to a quiche or pumpkin pie, perhaps a chiffon cheesecake, things of that nature that are delicate and fluffy for which, I might add, we did crack our own hand eggs all along for these products. We never did use frozens.

The interior baking temperature of those items is a minimum of 170 degrees with a probe thermometer, and I am talking about dead center in the middle. We are not talking about an outer temperature, because that is what we have to guage it on. For the average thing that we bake in the bakery, the minimum amount of time that I can think that we bake anything in our shop are cookies, and the minimum we bake those are about 12 to 15 minutes.

Most things bake for at least 20 minutes, far in excess of the time it would take to sanitize the eggs.

I see the light on, and I wanted to summarize with just one other point.

I have heard it said that the big issue here is whether we should pass the liquid over the shell or the bacteria contamination will get into the product. I have heard, and I have not been in an egg breaking plant, but I have been told that they break them at the rate of 7½ eggs per second and one person has to watch these eggs go by, and if they see a bad egg, they reject it.

I saw a film on a videotape which is on the monitor back there which, if it is of any interest to you, you may view or it could be entered as a record. We were watching one lady watch 7½ eggs go by in a second. They drop in these little cups and then they can flip them out. The feasibility that she could visually inspect those 7½ eggs in that second any more than I could take that crate of eggs and turn it over and make sure there were no cracks or checks or bad spots—gentlemen, I have a lot of difficulty seeing that it is any different.

In that same tape, they have a strainer that catches whatever egg shell does drop into the batter, and the egg runs over that egg shell as it goes through that strainer. Now, how often they empty that or how much is in there, I guess that could come under the same heading as are we smart enough or do we care enough to clean our egg machine in the time that it should be cleaned.

We do care. We didn't buy frozen eggs or fresh eggs because of price in our bakery. We bought them because of quality. I would like to bring that point out in my final summation. The members of our association are interested in quality. That is why there are only 70 of us today instead of 500. We will not compromise quality for price or the customer will not come back to us.

So, before you make us go back to the time consuming hand cracking method, we would surely appreciate more scientific tests to be done on this machine.

Thank you very much for the time.

[The prepared statement of Mr. Randall McArthur follows:]

McARTHURS
Party Cake Bakery

3417 Lemay Ferry, St Louis, Mo 63125

House Agriculture Committiee
U. S. House Of Representitivies
Washington D.C.

Honored Members of the Committiee,

My name is Randall J. McArthur,I presently operate McArthurs Party Cake Bakery in St. Louis Mo. I am a second generation bakery owner.I, took over the operation of our family bakery from my father 10 years ago. I am also the current President of both The Master Retail Bakers of St. Louis and the Missouri Bakers Association. These are trade associations comprised of retail and supermarket bakeries from all of Missouri and also Southern Illinois.

I,have been requested by Mr. Mike Maynard, of Misa Manufacturing Co. To testifiy before your committiee as to if I feel there need in the retail bakery buisness for a machine such as the" Egg Master " egg cracker. My reply to, this is a hearty YES. This is based on my experiences with the machine over the last four years.

I, would first like to address the issue of Sallmonella Infection. It has been implied that use of this machine would result in massive food poisining. A quick study of the facts quickly disprove this. All refernces to bacteria from here on out are based on information taken from the Applied Foodservice Sanitation handbook. Library of Congress #78-52282. First I would like to list for you what the U.S. Public Health Dept.deems as potentially hazardous foods."Any food that consists in whole or in part of milk or milk products, eggs, meat, poultry, fish, shellfish, edible crustacea, our other ingredients, including synthetic ingredients, in a form capable of supporting rapid and progressive growth of infectious or toxigenic micro-organisims.The term does not include clean,whole, uncracked eggs or foods which have a pH level of 4.6 or below." So from this we see that eggs do not become a potentially hazardous food until you crack them. Next you need to know that bacteria grow in 5 phases(see attached copy.)The 5 phases are lag phase-no multiplication, rapid

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multipication phase, slowed multiplication, stable phase-new cells killed by death of old cells, death phase. Next you need to know the temperature range where bacteria rapidly multiply,60 degrees farenheit to 120 degrees farenheit. There is very little bacterial growth below 45 degrees farenheit and most bacteria is killed between 140-150 degrees farenheit. Keep these facts in mind as we will come back to them in just a moment.

It has long been a proven fact that the best tasting and highest quality baked foods are made with fresh eggs. Every baker would use them if it was not for the high cost of the labor required to crack them. Most bakers that make alot of cakes use a more expensive frozen egg product called fortified eggs, that have a higher percentage of yolks than regular frozen eggs do. They do this to get a cake that has a texture comparable to one made with fresh eggs. In our shop we used fresh eggs exclusively for many years, but the continued growth we experinced made it infeasible to crack all our own eggs by hand so we had to go to some frozen eggs. We used the more expensive fortifed eggs, but still did not get as nice a product as we did with fresh eggs. Then we discovered the "Egg Master" and what a Godsend it has been. We now use fresh eggs in all our bakery products and do this at a cost substantially lower than frozen eggs. The machine is so fast that the convinence of being able to crack 60-90 dz eggs in five minutes or so, is actually better than trying to guess how many eggs you will need three to four days in advance, so you can get the frozen eggs in the icebox or in cold running water to thaw.(Then hope you guess right because you can't make bakery goods with eggs frozen solid.)

Let us analyze what happens when you crack eggs with the Egg Master. We naturally are using only graded U.S.D.A. eggs. Remember these eggs are not a potentially hazardous food until after they are cracked. So from this point our responsibility is to see that the eggs are handled so they never get out of the lag phase of bacterial growth. This is the phase where bacteria are exposed to a new environment but do not multiply in numbers. The F.D.A. model food ordinance estimates this period at about 4 hours. We then

McARTHURS
Party Cake Bakery

3417 Lemay Ferry, St Louis, Mo. 63125

check the temperature of the eggs during the cracking process. We want to make sure the eggs never obtain a temperature warm enough for bacteria to multiply. We take the eggs right out of a 34 degree icebox 4-5 cases at a time and crack them using the Egg Master. We would fill a 5 gal. bucket and check it's temperature. The eggs are about 2 degrees warmer after cracking. So we put them right in the icebox and the eggs never have a chance to get above 45 degrees, the temperature where bacteria begin to rapidly multiply. We also checked some eggs which we cracked by hand, a U.S.D.A. approved proceedure. We discovered that by the time we cracked even a gallon measure full the temperature had risen to 45 degrees. Just think how warm they would be by the time a person would crack a 5 gallon bucket full. It would be even worse if the person cracking the eggs had a sore on their hands, or sneezed while cracking the eggs. The potential for bacterial contamination is much greater in hand cracking than in using the Egg Master. Yet I understand people are being told that they may crack eggs by hand but not with the Egg Master"? In the majority of most foodborne illness people are the main source of contamination. Remember it has only taken us five minutes to crack our eggs and we put them right in the ice box. For bacteria to even begin to multiply they need to set about four hours at room temperature after cracking. We will use these eggs out of the ice box over the next few hours for our daily production. On top of this every thing in our bakery is either baked our cooked to at least 170 degrees farenheit, most things are brought to a even higher temperature. These temperatures are more than high enough to kill any bacteria that might be there. There are those who ask about using unpasturized eggs in ice cream custards and etc. that might not get heated to 140 degrees farenheit. According to the U.S. Public Health Dept. only clean fresh shell eggs may be used in any product that will not be properly cooked. So we are not even supposed to use frozen pasturized eggs in these products. Why? Because frozen eggs are not some kind of magical sterile product as the processors would like us to believe. They take all the rejected eggs cracks dirtys

3

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etc. and by pasturizing reduce the bacteria the eggs are exposed to safe levels. All the time required to freeze,handle, and thaw these eggs allow them to slowly rebuild bacteria counts that according to tests equal or exceed those of eggs cracked with the Egg Master.

The cost of fresh eggs using the Egg Master has consistently been 25%-30% less than when we were using frozen eggs. Sometimes the cost difference has been as great as 50%. The price of fresh eggs today is almost the same as it was 10 years ago, while the price of frozen eggs has almost doubled. This would lead one to believe that the egg processors and middlemen are profiting at the expense of the end user and farmer.

Farmers would recive a better price for their eggs if the sale of this machine is not restricted. As I said previously the price of shell eggs has changed very little in the last 10 years. But if the demand for quality shell eggs would steadily rise so would the price farmers would recive.This would occur simply because of the law of supply and demand. There are many times egg farmers have to sell perfectly saleable eggs such as A small or B large to egg processors at rock bottom prices (the same as cracks) because there is no market for these eggs.

These opinons are not just my own but are shared by each and every baker in Missouri that owns an Egg Master. We are all tickled pink with the machine. And would consider it an act of war if someone were to come into our shops and tell us we could not use a machine that not only enabled us to make a better product, but also saved us money. After all that concept is what sparked the industrial revolution of the 1800's. Have we progressed so far that we now need to go backwards? I pray to God we haven't. I hope this letter can be of some assistance in your deciding whether or not this machine can be benificial to people in the baking buisness. And absoultly safe to the most important people in the world,our customers.

Randall J. McArthur
President
Missouri Bakers Association
St. Louis Master Retail Bakers Assn.

(Attachment follows:)

Phone (314) 894 0900

BACTERIA

Bacteria and their relevancy to society may be classified in four groups:

Beneficial
Benign
Spoilage and
Pathogenic.

Beneficial or useful bacteria are utilized in the processing of many foods such as buttermilk, cheeses, wine and pickled products.

Benign or harmless bacteria do neither good or harm. The majority of bacteria are of this type.

Spoilage bacteria brings about the breakdown of food with off-smell, taste and appearance. Although it may not necessarily mean that the food has become a health hazard, it does cause an economic loss as the food cannot be used because of its deteriorated condition. An example is the over-ripe banana.

Pathogenic or **Poisonous** bacteria are the ones of greatest importance to the food service operator for they are capable of causing illness. In many instances there is no outward change in the appearance of the food when these poisonous bacteria are present.

Growth of Bacteria

Bacteria like all living organisms grow and multiply under certain favorable conditions. These conditions include moisture, warmth or heat, food and time.

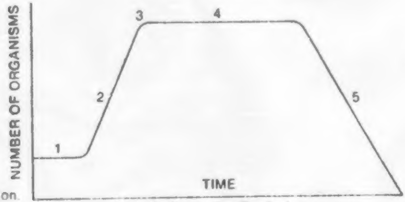
Moisture — Products found in our kitchen such as rice, dry beans and cereals, flour and sugar do not contain adequate moisture to promote growth of bacteria. However, most of the products we prepare have the necessary moisture.

Warmth — Most bacteria grow best between 60°F and 120°F. This then is the obvious reasoning for calling 45-140°F the danger zone and establishing these temperatures as limits in most sanitation ordinances. The 1976 FDA Model Food Service Ordinance reads: "The temperature of potentially hazardous food shall be 45°F or below or 140°F or above at all times except as otherwise provided in the ordinance." In another section, the ordinance states: "Potentially hazardous foods requiring cooking shall be cooked to heat all parts of the food to a temperature of at least 140°F with 150°F required for pork and 165°F for poultry and stuffed meats.

Food — Bacteria responsible for foodborne illness prefer non-acid foods to the sour foods. These include such popular foods as meat, fowl, milk, eggs and fish, all high in protein. Most vegetables and many fruits, being slightly sour do not support rapid growth of bacteria and of course pickled fruits and vegetables are very unlikely to be affected with bacterial growth. The degree of acidity is measured by a term described as pH. A completely neutral food (neither acid or base) has a value of 7.0. As the pH value approaches 0, the more acidic the foods. Limes and lemons have a pH value close to 2.0, while tomatoes which are less sour have a pH of 4. With this brief explanation, it is easy to understand FDA's definition of potentially hazardous foods — "any food that consists in whole or in part of milk or milk products, eggs, meat, poultry, fish, shellfish, edible crustacea, or other ingredients, including synthetic ingredients, in a form capable of supporting rapid and progressive growth of infectious or toxigenic microorganisms. The term does not include clean, whole, uncracked, odor-free shell eggs or foods which have a pH level of 4.6 (a measure of acidity) or below or a water activity (aW) value of 0.85 or less." These are the foods that are **POTENTIAL** health hazards if mishandled.

Oxygen Requirements – Bacteria and other microorganisms have varying needs for oxygen which provides another means of classification. There are those that require oxygen for growth. They are called aerobes and include the molds, yeasts and some of the bacteria. At the other extreme are those that multiply when oxygen is excluded and are named anaerobes. Their toxins are extremely potent. In the middle are those that multiply with or without oxygen. These are known as facultative organisms.

Time – Bacteria "grow" by splitting and multiplying over a period of time. The thin walls of a bacterial cell literally explode and divide into two new cells. Each new cell splits again into two additional cells. How rapidly these grow is dependent upon the conditions just discussed. There is a well defined pattern in the number of organisms developed. This pattern is shown in Figure 1. Our effort in food service management is to be able to maintain bacteria growth within section 1 (lag phase) of the curve shown in Figure 1.



Growth Curve for Bacteria

1. The lag phase — no multiplication.
2. The rapid multiplication phase.
3. The slowed multiplication phase.
4. The stable phase — new cells are cancelled out by death of cells.
5. The death phase — cell deaths outnumber new cells.

FIGURE 1

We have learned that moisture, warmth and food are the conditions favorable to growth of bacteria. Obviously we do not want to make all menu offerings dry and extremely sour. Therefore the one condition that can be controlled is temperature and this is the reason for the importance of the time/temperature relationship and the need for rapid cooling. The Model Ordinance reads: "Potentially hazardous food requiring refrigeration after preparation shall be rapidly cooled to an internal temperature of 45°F or below. Potentially hazardous foods of large volume or prepared in large quantities shall be rapidly cooled, utilizing such methods as shallow pans, agitation, quick chilling or water circulation external to the food container so that the cooling period shall not exceed 4 hours."

Mr. OLIN. All right. We have the last witness, Mr. Nicholas Pyle.

STATEMENT OF NICHOLAS A. PYLE, INDEPENDENT BAKERS ASSOCIATION

Mr. PYLE. Thank you, Mr. Chairman.

I am pleased to appear before the subcommittee this afternoon, and I wish to read my statement.

My name is Nicholas Pyle. I represent the Independent Bakers Association. The IBA appears today in opposition to legislation which would prohibit the use of centrifugal egg breaking machines in bakeries, restaurants, and other egg using establishments.

The Independent Bakers Association is a national trade association comprised of more than 300 members, many of whom are small and medium sized independent family owned bakeries. IBA members produce half of the wholesale baked goods used in the United States.

The Egg King, manufactured by MiSa Manufacturing, has been used in several of our members' bakeries in the last few years. The use of centrifugal devices to crack, extract, and blend egg meats have proven effective in terms of costs as compared to hand cracking. The Egg King has also resulted in production cost savings as compared to the purchase of frozen eggs in a ready mixable form.

The machine allows our member to convert from the use of frozen to fresh eggs in large quantities in a cost effective manner. The use of fresh eggs by our members provides for a better product and, as one of our members commented, the taste clearly shows the difference.

The Independent Bakers Association is aware of the complaints made to the U.S. Department of Agriculture, but is quick to point out that the complaints are not from the restaurants, bakeries, hospitals, and other food service establishments currently using the machines. The complaints are from the owners and operators of egg products plants.

It is understood by our member bakeries that equipment must be maintained in a clean and proper manner. Proper maintenance not only provides for sanitary conditions but also provides for a better product and increases machine life. Proper cleaning of equipment and strict accordance to manufacturers' and FDA guidelines is a way of life adhered to today by today's modern wholesale bakers. The machine is stainless steel and easily cleanable.

The Independent Bakers Association agrees that the Food and Drug Administration and State health agencies are the proper agencies under the Egg Products Inspection Act to supervise egg breaking in bakeries, restaurants, and other food service establishments. The Food and Drug Administration has found that the Egg King creates no health hazard so long as the machine is used in accordance with manufacturer's instructions.

The Egg King has been tested and/or approved by the department of health, Prince Georges County, MD; U.S. Testing Co., Inc., California Division; and the Baking Industry Sanitation Standards Committee whose standards are prescribed by the USDA; the U.S. Food and Drug Administration; the National Environmental Health Association; and the American Public Health Association.

Liquid egg from the machine has been tested extensively by the department of health, State of Hawaii and found to be free of salmonella.

Mr. Chairman, from personal experience as a one-time restaurant cook, one of my daily chores included cracking 30 dozen eggs for breakfast. The task usually took a half an hour to accomplish. When I saw the Egg King in action recently, I was amazed to see one-half hour's work accomplished in 1 minute.

In summary, the centrifugal egg cracking machine provides wholesale bakers, particularly those who manufacture sweet goods, with an efficient, cost effective method of fresh egg cracking which improved the quality of their product. We hope very much the committee will permit the continued use of the MiSa Manufacturing Egg King.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Pyle follows:]

November 21, 1985

STATEMENT BY
NICHOLAS A. PYLE
of the
INDEPEDENT BAKERS ASSOCIATION
before the
U. S. HOUSE OF REPRESENTATIVES, COMMITTEE ON AGRICULTURE
LIVESTOCK, DAIRY, AND POULTRY SUBCOMMITTEE
hearings on
"REVIEW OF THE EGG PRODUCTS INSPECTION ACT"

MR. CHAIRMAN, MY NAME IS NICHOLAS A. PYLE. I REPRESENT THE INDEPENDENT BAKERS ASSOCIATION (IBA). THE IBA APPEARS TODAY IN OPPOSITION TO LEGISLATION WHICH WOULD PROHIBIT THE USE OF CENTRIFUGE EGG BREAKING MACHINES IN BAKERIES, RESTAURANTS, AND OTHER EGG USING ESTABLISHMENTS.

THE INDEPENDENT BAKERS ASSOCIATION IS A NATIONAL TRADE ASSOCIATION COMPRISED OF MORE THAN 300 MEMBERS, MANY OF WHOM ARE SMALL AND MEDIUM SIZED INDEPENDENT FAMILY-OWNED BAKERIES. IBA MEMBERS PRODUCE HALF OF THE WHOLESALE BAKED GOODS USED IN THE UNITED STATES.

THE EGG KING, MANUFACTURED BY MISA MFG., INC., HAS BEEN USED IN SEVERAL OF OUR MEMBERS' BAKERIES IN THE LAST FEW YEARS. THE USE OF CENTRIFUGAL DEVICES TO CRACK, EXTRACT, AND BLEND EGG MEATS HAS PROVEN EFFECTIVE IN TERMS OF COSTS AS COMPARED TO HAND

CRACKING. THE EGG KING HAS ALSO RESULTED IN PRODUCTION COST SAVINGS AS COMPARED TO THE PURCHASE OF FROZEN EGGS IN A READY MIXABLE FORM. THE MACHINE ALLOWS OUR MEMBERS TO CONVERT FROM THE USE OF FROZEN TO FRESH EGGS IN LARGE QUANTITIES IN A COST EFFECTIVE MANNER. THE USE OF FRESH EGGS BY OUR MEMBERS PROVIDES FOR A BETTER PRODUCT AND AS ONE OF OUR MEMBERS COMMENTED, "THE TASTE CLEARLY SHOWS THE DIFFERENCE."

THE INDEPENDENT BAKERS ASSOCIATION IS AWARE OF THE COMPLAINTS MADE TO THE UNITED STATES DEPARTMENT OF AGRICULTURE, BUT IS QUICK TO POINT OUT THAT THE COMPLAINTS ARE NOT FROM THE RESTAURANTS, BAKERIES, HOSPITALS, AND OTHER FOOD SERVICE ESTABLISHMENTS CURRENTLY USING THE MACHINES. THE COMPLAINTS ARE FROM OWNERS AND OPERATORS OF EGG PRODUCTS PLANTS.

IT IS UNDERSTOOD BY OUR MEMBER BAKERIES THAT EQUIPMENT MUST BE MAINTAINED IN A CLEAN AND PROPER MANNER. PROPER MAINTENANCE NOT ONLY PROVIDES SANITARY CONDITIONS BUT ALSO PROVIDES A BETTER PRODUCT AND INCREASES MACHINE LIFE. PROPER CLEANING OF EQUIPMENT AND STRICT ACCORDANCE TO MANUFACTURERS AND FDA GUIDELINES IS A WAY OF LIFE ADHERED TO BY TODAYS MODERN WHOLESALE BAKERIES. THE MACHINE IS STAINLESS STEEL AND EASILY CLEANABLE.

THE INDEPENDENT BAKERS ASSOCIATION AGREES THAT THE FOOD AND DRUG ADMINISTRATION AND STATE HEALTH AGENCIES ARE THE PROPER AGENCIES UNDER THE EGG PRODUCTS INSPECTION ACT TO SUPERVISE EGG BREAKING IN BAKERIES, RESTAURANTS, AND OTHER FOOD SERVICE ESTABLISHMENTS. THE FOOD AND DRUG ADMINISTRATION HAS FOUND THAT THE EGG KING CREATES NO HEALTH HAZARD SO LONG AS THE MACHINE IS USED

IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

THE EGG KING HAS BEEN TESTED AND/OR APPROVED BY THE DEPARTMENT OF HEALTH, PRINCE GEORGES COUNTY, MARYLAND; U.S. TESTING COMPANY, INC., CALIFORNIA DIVISION; AND THE BAKING INDUSTRY SANITATION STANDARDS COMMITTEE WHOSE STANDARDS ARE PRESCRIBED BY THE U.S.D.A.; THE U.S. FOOD AND DRUG ADMINISTRATION; THE NATIONAL ENVIRONMENTAL HEALTH ASSOCIATION, AND THE AMERICAN PUBLIC HEALTH ASSOCIATION. LIQUID EGG FROM THE MACHINE HAS BEEN TESTED EXTENSIVELY BY THE DEPARTMENT OF HEALTH, STATE OF HAWAII, AND FOUND TO BE FREE OF SALMONELLA.

MR. CHAIRMAN, FROM PERSONAL EXPERIENCE, AS A ONE TIME RESTAURANT COOK, ONE OF MY DAILY CHORES INCLUDED CRACKING 30 DOZEN EGGS FOR BREAKFAST. THE TASK USUALLY TOOK ONE HALF AN HOUR TO ACCOMPLISH. WHEN I SAW THE EGG KING IN ACTION RECENTLY, I WAS AMAZED TO SEE ONE HALF HOUR'S WORK ACCOMPLISHED IN ONE MINUTE.

IN SUMMARY, THE CENTRIFFUGAL EGG CRACKING MACHINE PROVIDES WHOLESALE BAKERS, PARTICULARLY THOSE WHO MANUFACTURE SWEET GOODS, WITH AN EFFICIENT, COST-EFFECTIVE METHOD OF FRESH EGG-CRACKING WHICH IMPROVES THE QUALITY OF THEIR PRODUCT.

WE HOPE VERY MUCH THE COMMITTEE WILL PERMIT THE CONTINUED USE OF THE MISA MANUFACTURING "EGG KING".

THANK YOU, MR. CHAIRMAN.

Contact: Nicholas A. Pyle
Independent Bakers Association
P.O. Box 3731
Wasington, D.C. 20007
202-223-2325

Mr. **Olin**. Thank you for your testimony.

Let me just ask a couple of questions, because we have gone over quite a number of these points a number of times before.

Mr. Gohla, you talked about the economics. I take it that the numbers you quoted, $15.75 was the cost of fresh eggs that you buy and put in the mixing machine and that the $26.32 was the frozen egg price. Is that right?

Mr. **Gohla**. That is right.

Mr. **Olin**. So, you are getting eggs then at a little more than half of the cost.

Mr. **Gohla**. That is right. It is a considerable savings.

Mr. **Olin**. It is a substantial saving for bakeries. I just wanted to call to your attention—I realize that there are all kinds of bakers. You gentlemen, apparently, are among the best and take good care of your premises and so on. The USDA had some complaints about certain bakeries and restaurants that were using the Egg Master in California. They visited four different bakeries. They came back with a pretty dismal story, largely related to the dirty eggs and dirty conditions that they found in those particular bakeries.

They questioned the operators of the bakeries, employees I guess. I won't read you the whole report, but the comments were pretty rough. They talk about mixed rot with putrid odors certainly would have gone into the machines without being detected by the operator. One of the comments was, "We do get some smelly eggs occasionally, but everything goes into the machine. We have had some cases where filler flats appeared to have been chewed by rats or mice. My people are not egg inspectors. They are going to dump everything into the hopper."

Comments of this nature wouldn't have caused the USDA to feel very secure about that situation. Is this something that you recognize in your industry some places? Mr. McArthur.

Mr. **Don McArthur**. I don't deny something like this couldn't happen. It could happen in any restaurant or any place that there is in the country. But the local health departments should not allow a place like this to exist for 5 minutes.

Mr. **Olin**. That is certainly true.

Mr. **Don McArthur**. It could have only gotten that way because it was allowed to operate. It doesn't get that way overnight.

The USDA when they go into a plant like this should lock it up absolutely immediately. If the bad eggs are in that plant that had rats chewing on the flats, you can't blame the baker, whether that was my shop or anyone else's, regardless of the condition of the shop. That place that they got the eggs from is the one that they should go back and enforce the law to the fullest, because those types of operations give the whole food industry a very bad black eye. And we don't need that type of a thing in this industry.

Mr. **Olin**. Well, I am certain that is the case. That is an indictment, you are right, of the local health inspectors as well as those particular merchants or businessmen.

Mr. **Don McArthur**. I agree. There are places I have been in that I am ashamed to say—not just bakeries but all types of food places, especially some of the wholesale produce markets, the different areas that I have been into. I am ashamed to say that these people are even associated with the food industry.

Another thing. They brought up paper products before. Paper products are one thing that is not regulated. Every item we put in our bakery goes out of the store door in some type of paper product, and it has never been inspected by anyone.

We have many avenues in the food industry that need to be explored, and I think the MiSa machine is one that stands for itself. I don't think this machine is trying to be covered over with any type of thing. It will be demonstrated to anybody anywhere. It stands on its own merit.

Mr. OLIN. Well, I think you are right. The machine, of course, has nothing to do with the dirty conditions.

Mr. DON MCARTHUR. No.

Mr. OLIN. But if that were prevalent, that would be a big problem because people can dump into the machine and it gets all mixed up.

Mr. DON MCARTHUR. Right, but they shouldn't even have—I wouldn't want those type of eggs broken by hand.

Mr. OLIN. Well, that is true. That is right.

Mr. DON MCARTHUR. I wouldn't even allow them in my bakery.

Mr. OLIN. And I suppose if these operators had been buying frozen eggs, Lord knows how they took care of the frozen eggs. That might be about as bad.

Mr. DON MCARTHUR. The same type of situation. They would have a 103-degree day outside for 3 days, and the top of the lid up there is like 100 degrees and bacteria multiplying like crazy.

Mr. OLIN. Well, listen, I thank you gentlemen for coming all this way and testifying. I think in this day's worth of testifying, we have a much better understanding of what the situation is and what the different aspects of it are.

As I said earlier, I believe the committee is going to try to find a way of closing the gap on who is responsible for making these determinations, and we will try to do the thing in just as objective a way as we possibly can and not based on emotion.

So, thank you very much, and I will call the hearing adjourned.

[Whereupon, at 3:25 p.m., the subcommittee recessed, to reconvene subject to the call of the Chair.]

[Material submitted for inclusion in the record follows:]

STATEMENT OF THE AMERICAN FARM BUREAU FEDERATION TO THE LIVESTOCK, DAIRY AND POULTRY SUBCOMMITTEE OF THE HOUSE AGRICULTURE COMMITTEE WITH REGARD TO THE EGG PRODUCTS INSPECTION ACT

NOVEMBER 21, 1985

The American Farm Bureau Federation is a general farm organization with a membership of 3.3 million member families in 48 states and Puerto Rico. Farmers and ranchers of every agricultural commodity produced in this country can be found within this membership.

Our membership has a direct interest in the proper and responsible administration of the Egg Products Inspection Act of 1970, the intent of which is to protect consumers from the consumption of adulterated, contaminated or otherwise unwholesome eggs or egg products.

Since the enactment of the Egg Products Inspection Act, consumers have been able to purchase and consume foods containing eggs and egg products with complete confidence in their wholesomeness and quality.

Recently Farm Bureau became aware of a practice that threatens to undermine consumer confidence in eggs. That is, the use of a centrifuge egg breaking machine by certain businesses.

The machine, as the name implies, spins at a high rate of speed crushing all the eggs placed in it. Because it spins so quickly, the egg contents (yolk and albumen) are separated from the shell.

When the Egg Products Inspection Act was enacted, the mandatory continuous inspection of egg processing plants became law. Under terms of the Act, USDA established regulations which required that eggs be broken in such a manner as to minimize contact between the egg shell and egg interior and also permit visual inspection of each individual egg being broken. To achieve this, USDA has consistently prohibited the use of centrifuge machines for the purpose of egg breaking in USDA inspected egg processing plants.

Egg producers are concerned about the discrepancies between these two methods of breaking eggs because they know egg shells can, and do, harbor bacteria, such as salmonella, even when the eggs are properly washed and sanitized. And the egg business is dependent upon consumer confidence. If a bakery were to purchase eggs and break them in a centrifuge machine and the food products produced caused illness or possibly even death, the eggs would be blamed, not the machines.

In summary, we are concerned that a public health disaster will occur if centrifuge egg breaking equipment continues to be used in bakeries and restaurants. Now is the time for USDA to issue regulations prohibiting the use of centrifuge egg breaking in all commercial establishments producing food for human consumption.

CITY OF ATLANTIC CITY
Atlantic City • New Jersey • 08401

November 20,1985

TO: SUBCOMMITTEE LIVE STOCK, DAIRY AND POULTRY OF HOUSE
COMMITTEE ON AGRICULTURE
TONY COELHO, CHAIRMAN

FROM: ENVIRONMENTAL HEALTH SECTION ATLANTIC CITY DIVISION
OF HEALTH-DENISE A. NELSON, CHIEF Denise A Nelson

RE: FOODBORNEILLNESS INVESTIGATION
HARRAH'S MARINA HOTEL AND CASINO

On 10-24-85 the Atlantic County Health Department reported five confirmed cases of Salmonella enteritidis. The five persons are employees of Harrah's Marina Hotel Casino.

The foodborne illness investigation was inititated by the Environmental Health Division the same day (10-24-85). Chapter 12 State Sanitary Code retail food establishment inspections were conducted in the following locations: Employees Cafeteria, The Deli, Main Kitchen, Butcher Room and Bakery.

The case studies indicated the suspect foods were scrambled eggs and or french toast. Upon questioning the chef on preparation practices of scrambled eggs and french toast it was noted that an egg extractor " The Egg Master" was utilized for breaking eggs. The Egg Mascer was noted to be in the following condition: "perforated outer stainless steel basket contains dry egg yolks and dry broken shell pieces, these are food contact surfaces, also interior surface where liquid collects and is dispensed contains both shell and egg residues." This machine and egg product were placed under embargo. At this time it was also noted that the Egg Master machine contains screws which accumulate egg residues. (see enclosure). In our opinion the Egg Master machine can not be easily cleaned and santized.

Subsequently a survey was conducted to determine the sanitary conditions of the Egg Master machines throughout the City due to our concern that the Egg Master machine is not easily cleanable and because of the high volume of people eating in casino hotels. All egg shells can not be sanitized and when egg liquid mixes with egg shells the egg liquid becomes contaimnated. (It is not uncommon for a major food outlet in a casino to serve over 20,000 meals per day.) The embargoed devices located in casino hotels were observed to be in the following condition:

1.) The silicon seam located on the outer perforated basket (of some recent models) accumulates excessive amounts of egg shells. Silicon is not an acceptable food contact surface.
2.) Spout food contact surfaces excessively encrusted with egg product. Note: This spout is not detachable and is not easily cleanable:
3.) The lower section of the outer perforated basket at cylinder base juncture is indented allowing for egg wastes to collect.
4.) The rim on inner perforated basket is soiled with dried egg product. The rim is not smooth and easily cleanable.
5.) Screws attaching outer perforated basket to bottom of cast aluminum base are a food contact surface. Screws are not acceptable food contact surfaces.

In conclusion, it is the opinion of this Department, that based on the design and construction of the "Egg Master/Egg King" machine, which is in violation of the New Jersey State Sanitary Code-N.J.A.C. 8:24-5.1 a & b (see enclosure), that its implication as a possible cause in the recent food-borne outbreak (Salmonella enteritidis) at Harrah's Marina Casino cannot be refuted.

This conclusion is based on the following two factors: the comingling of egg product and egg shell, and the inability of this machine to be properly cleaned and sanitized under normal operating conditions as evidenced by our inspections.

Investigations and reports were conducted by the following:

Dawn Mays, Janet Reinhard and Martin Connie of the Atlantic City Health Department.

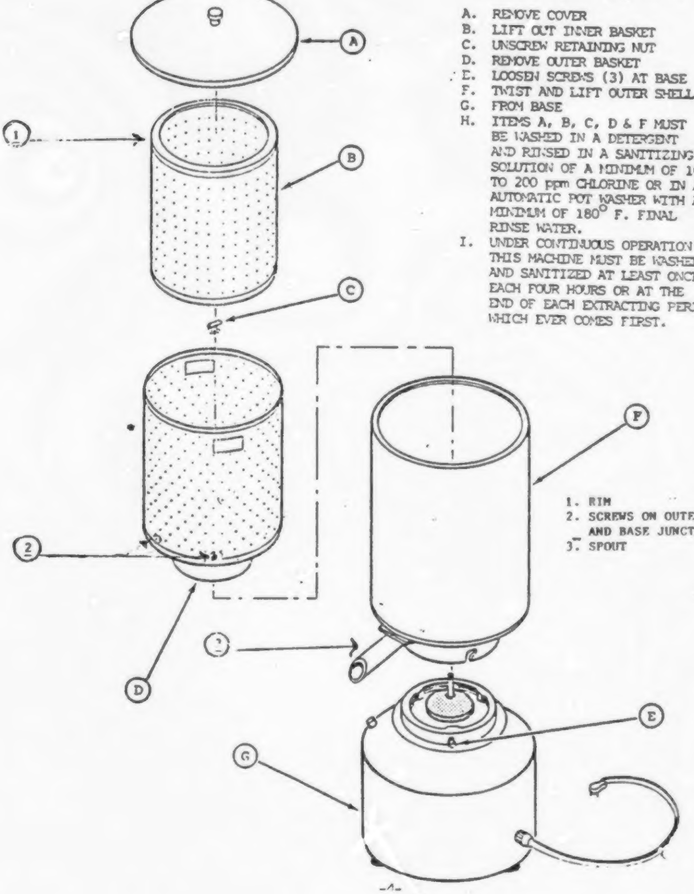
DAN:pas

(Attachments follow:)

CLEANING PROCEDURE

REMOVAL AND ASSEMBLY SEQUENCE

A. REMOVE COVER
B. LIFT OUT INNER BASKET
C. UNSCREW RETAINING NUT
D. REMOVE OUTER BASKET
E. LOOSEN SCREWS (3) AT BASE
F. TWIST AND LIFT OUTER SHELL
G. FROM BASE
H. ITEMS A, B, C, D & F MUST BE WASHED IN A DETERGENT AND RINSED IN A SANITIZING SOLUTION OF A MINIMUM OF 100 TO 200 ppm CHLORINE OR IN AN AUTOMATIC POT WASHER WITH A MINIMUM OF 180° F. FINAL RINSE WATER.
I. UNDER CONTINUOUS OPERATION THIS MACHINE MUST BE WASHED AND SANITIZED AT LEAST ONCE EACH FOUR HOURS OR AT THE END OF EACH EXTRACTING PERIOD, WHICH EVER COMES FIRST.



1. RIM
2. SCREWS ON OUTER BASKET AND BASE JUNCTURE
3. SPOUT

Utensil washing sinks or vats are not acceptable as ng facilities for personnel.

Employees shall keep their fingernails clean and neatly mmed.

8:24-4.4 Clothing

(a) All persons, including dishwashers, engaged in handling food or food contact surfaces shall wear clean outer garments.

(b) Employees engaged in the preparation of food and other persons who may come in contact with these operations shall use effective hair restraints to prevent the contamination of food. Service personnel shall take steps necessary to keep hair from food and food contact surfaces.

SUBCHAPTER 5

FOOD EQUIPMENT AND UTENSILS

8:24-5.1 Design, construction and materials

(a) Multiuse equipment and utensils shall be constructed and repaired with safe materials, including finishing materials. They shall be corrosion resistant, nonabsorbent and shall be smooth, easily cleanable, and durable. Under conditions of normal use they shall be resistant to denting, buckling, pitting, chipping, crazing, and excessive wear; and shall be capable of withstanding repeated scrubbing, scouring, and the corrosive action of cleaning and sanitizing agents and food with which they come in contact. Except that corrosion resistant requirements shall not preclude the use of cast iron as a food contact material when approved by the health authority.

(b) Food contact surfaces of equipment and utensils shall be smooth, free of breaks, open seams, cracks, chips, pits, difficult to clean internal corners and crevices and similar imperfections; shall be in good repair; and shall be easily accessible for cleaning and inspection. Threads which routinely contact food shall be of sanitary design and no V-type threads shall be used. Provided, wicker or plastic woven type or other hard to clean breadbaskets, when suitably lined with a clean disposable material or a clean washable material, may be used for unwrapped food.

(c) Cutting blocks, boards, and bakers' tables shall be of hard maple or equivalent material which is nontoxic, nonabsorbent, smooth, and free of cracks, crevices, and open seams. Cutting boards shall be easily removable and cleanable. Wood may be used for single service articles, such as chop sticks, stirrers, or ice cream spoons. The use of wood as a food contact surface under other circumstances is prohibited.

(d) Safe plastic, safe rubber or safe rubber-like materials that are resistant under normal conditions of use to scratching, scoring, decomposition, crazing, chipping and distortion, that are of sufficient weight and thickness to permit cleaning and sanitizing by normal dishwashing methods, and which meet the general requirements set forth in (a) above are permitted for repeated use. Scratching and scoring of cutting surfaces that do not interfere with cleaning and sanitizing shall not constitute a violation of this section.

(e) Mollusk and crustacea shells may be used only once as a serving container. Further reuse of such shells for food service is prohibited unless these shells are thoroughly washed, rinsed and sanitized. Sanitization of these shells shall be accomplished by immersion in boiling water for three minutes or immersion in a 100 ppm solution of chlorine for one minute.

(f) Equipment containing bearings and gears requiring unsafe lubricants shall be designed and constructed so that the lubricant cannot leak, drip, or be forced into food or onto food contact surfaces. Only safe food grade lubricants shall be used on equipment designed to receive lubrication of bearings and gears on or within food contact surfaces.

(g) Soft solder, when used as a food contact surface, shall be limited to joining metal or sealing seams between abutting metal surfaces; shall be of such formulation as to be nontoxic under use conditions; shall contain at least 50 percent tin; shall contain no more lead than is necessary under good manufacturing practice; and shall, consistent with good industrial practice in the refining of its constituent elements, be free of cadmium, antimony, bismuth, and other toxic materials.

(h) Hard solder (silver solder), when used as a food contact surface, shall be of such formulation as to be nontoxic under use conditions; shall be corrosion resistant; and shall consistent with good industrial practice in the refining of its constituent elements, be free of cadmium, antimony, bismuth, and other toxic materials.

(i) Ventilation hoods and devices shall be designed to prevent grease or condensation from collecting on walls and ceilings, and from dripping into food or onto food contact surfaces. Filters or other grease extracting equipment shall be readily removable for cleaning and replacement if not designed to be cleaned in place.

(j) Surfaces of equipment including shelves, not intended for contact with food, but which are exposed to splash, food debris, or otherwise require frequent cleaning, shall be reasonably smooth, washable, free of unnecessary ledges, projections, or crevices, readily accessible for cleaning, and of such materials and in such repair as to be readily maintained in a clean and sanitary condition. Fixed equipment designed and fabricated to be cleaned and sanitized by pressure spray methods shall have sealed electrical wiring, switches, and connections.

(k) Tubing conveying beverages or beverage ingredients to dispensing heads may be in contact with stored ice; provided, that such tubing is fabricated from safe materials, is grommeted at entry and exit points to preclude moisture (condensation) from entering the ice machine or the ice storage bin, and is kept clean. Condensate drainage or non-potable water drainage tubes from dispensing units shall not pass through the storage bin.

(l) All food contact surfaces, unless designed for in place cleaning, shall be accessible for manual cleaning and for inspection either:

1. Without being disassembled; or
2. By disassembling without the use of tools; or
3. By easy disassembling with the use of only simple tools kept available near the equipment, such as a mallet, a screwdriver or an open end wrench.

(m) Equipment intended for in place cleaning shall be so designed and constructed that:

1. Cleaning and sanitizing solutions can be circulated throughout a fixed system; and
2. Cleaning and sanitizing solutions will contact all interior surfaces, and
3. The system is self-draining or otherwise completely evacuated; and
4. Cleaning procedures result in thorough cleaning of the equipment.

(n) Sinks and drain boards shall be self-draining.

Title 8 N.J. Administrative Code

CITY OF ATLANTIC CITY
Atlantic City • New Jersey • 08401

October 24, 1985

HARRAH'S MARINA INCIDENT REPORT OF FOOD-BORNE OUTBREAK

On Thursday, October 24, 1985, I interviewed Sous Chef Albert Green about the procedure involved with the preparation of french toast served at the Employee's Cafeteria. The following are his comments:

> French toast is served daily from 6 AM-11 AM, and scrambled eggs are served 24 hours. He requisitions eggs daily from Load Dock "Bench Stock" Walkin Cooler - he receives about 10-12 cases of 8 dozen each.
>
> The eggs are purchased from Polakoff and Son's, who in turn purchased them from Tuckahoe Farms in Tuckahoe* NJ. *Noted correct location is Richland, NJ.
> The eggs are shipped up to the "Existing Garde Manger" and then put into the "Egg Master Egg Extractor - (specification in Harrah's File)"
>
> The batch is collected in a 20 gallon plastic lexan tub - which is about 3 cases of eggs per batch. It is placed in the walk-in cooler of the former bake shop area.
>
> The egg mixture is removed in small quantities.
>
> The french toast batter is eggs and cinnamon (no milk is added) and every serving is cooked to order. The french toast batter approximately 1 quart, is held in a ice bath during service.
>
> The egg extracting process is performed during the "Graveyard Shift" and sometimes just before the end of the 4-12 shift.
>
> Chef Green stated that all his people know and have been instructed that new egg mixture is never added to existing bulk mixture.
>
> This egg extractor - by Misa Mfg. Inc. has flaws in the design which inhibits effective cleaning of the inner basket, the outer basket and outer shell, plus the rubber seal of base motor section.

page 2 of 2

On October 29, 1985, the observations that I made were:

1) the shell does in fact pass thru both perforated baskets.

2) the shell does get stuck in the perforated baskets.

3) the "outer basket" is attached to bottom cast aluminum by 4 philip head screws.

4) the "cleaning procedure" does not state that these screws are to be removed when in fact they should be.

5) there is no way that this piece of food service equipment can be adequately and thoroughly washed, rinsed and sanitized.

6) this should remain under embargo.

John Pisano
Sanitary Inspector

JP:gs

CITY OF ATLANTIC CITY
Atlantic City • New Jersey • 08401

November 26,1985

Honorable E DeLa Garza
1430 Longworth House Office Building
Washington, D.C. 20515

Honorable Congressman Garza:

I am the Health Officer for the City of Atlantic City and am writing this letter in repudiation of a memo delivered to the esteemed Subcommittee on Livestock, Diary, and Poultry of the House Committee on Agriculture dated November 20,1985 authored by Denise Nelson, Chief Sanitary Inspector.

There is no confirming evidence linking the "Egg Master" egg extractor to an alledged Salmonella enteriditis outbreak. Additionally, the eggs were further processed after leaving the egg extractor. Not mentioned in the letter dated November 20,1985, is that there are people reported ill that insist they never ate on the premises. There is no assurance Harrah's Marina Hotel Casino was the site of an alledged outbreak.

The inspectors involved are qualified to note the condition of equipment as it relates to regulatory requirements. However they are not qualified epidemiologically to link the regulatory conditions with disease. Comments by the inspectors on the condition of the machine both on the basis of design and maintenance may be valid. However the position of the City of Atlantic City is that the condition of the Egg Master was coincidental to any alledged outbreak.

Prior to the writing of the memo, I read the draft. At that time I instructed the author to delete any linking of disease to the machine and to state that it is not the position of the City of Atlantic City that the machine is implicated in any outbreak. I was advised by Mrs. Nelson that the changes would be made, and that it was her personal opinion that the machine was involved.

If you have any further questions regarding this matter please do not hesitate to contact me. The entire investigation was overseen by the New Jersey State Department of Health.

Sincerely,

James L. Budd
Health Officer

JLB:pas

ARMED SERVICES COMMITTEE
HOUSE ADMINISTRATION COMMITTEE
REPUBLICAN STUDY COMMITTEE
REPUBLICAN POLICY COMMITTEE
EXECUTIVE COMMITTEE NATIONAL REPUBLICAN CONGRESSIONAL COMMITTEE

Congress of the United States
House of Representatives
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February 21, 1986

The Honorable Tony Coelho
Chairman
Subcommittee on Livestock, Dairy
and Poultry
1430 Longworth House Office Building
Washington, D. C. 20515

Dear Mr. Chairman:

Please insert the enclosed material in the transcript of the subcommittee oversight hearing which was held November 21, 1985 regarding the Egg King machine.

I appreciate your assistance.

Cordially,

Robert E. Badham
Member of Congress

REB/mm

New Jersey State Department of Health
Division of Epidemiology and Disease Control

FOOD MICROBIOLOGY REPORT

[illegible] [illegible]
11/5/86 [illegible]
[illegible]

Lab No. See below	Date Rec'd 10/31/85	Date Reported 11/6/85	Date Epid. Request 10/31/85

Epidemiologist Making Request
Dr. Harold Rosenfeld

Sample Description:
see below - all samples involved in E951-85 outbreak

Source:
Harrah's Casino and Marina, Atlantic City, NJ
All samples taken from employee's cafeteria

Submitted By Environmental Health Services
Retail food program

Title
Rick Matzer

Collected By
Connie Connors

Date
10/31/85

Examination Requested:
Presence or Absence of Salmonella

LABORATORY RESULTS

Results of Exam Request:

FPF204: No. TTT0080,approx, 50ml of skim milk form Tuscan Dairies, Woodbridge, NJ: rec'd in a whirl-pak bag taken from a bulk container.
FPF205: No TTT0081, 3 whole eggs with cracked shells from Tuckahoe Farms, Tuckahoe, NJ.
FPF206: No. TTT0083, 4 intact whole eggs from Tuckahoe Farms, Tuckahoe, NJ.
FPF207: No. TTT0082, several hundred ml of raw scrambled eggs, extracted from Egg Master machin before machine was cleaned; rec'd in a whirl-pak bag.
FPF208: No. TTT0084, several hundred ml of raw scrambled eggs, extracted from Egg Master machin after machine was cleaned; rec'd in a whirl-pak bag.

Results on all of the above: No Salmonella isolated.

Most Predominant Organism Isolated:

DISTRIBUTION: White-NJSDH Lab Green-Asst.Comm. Canary-Dr. Rosenfeld
Pink-E.I.S. Office Goldenrod-Epidemiologist

BACT-92
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P406

BEST COPY AVAILABLE

American Hotel & Motel Association
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(202) 223-6872

ALBERT L. McDERMOTT
Washington Representative

THOMAS F. YOUNGBLOOD
Assistant

CECILIA A. KIRBY
Assistant

December 3, 1985

The Honorable Tony Coelho
U.S. House of Representatives
Chairman
Subcommittee on Livestock,
Dairy & Poultry
1430 Longworth House Office Building
Washington, DC 20515

Dear Mr. Chairman:

We greatly appreciate your informing us of the oversight hearings on the Egg Products Inspection Act. AH&MA does indeed have an interest in the discussions of the amendment to the EPIA which was debated during floor consideration of H.R. 2100.

The American Hotel & Motel Association is a federation of hotel and motel associations located in the fifty states, the District of Columbia, Puerto Rico and the Virgin Islands, having a membership in excess of 8,800 hotels and motels accounting for over 1.26 million rooms. Inclusive in our membership are all of the major hotel and motel chains.

We wish to confine our comments to the use of centrifugal force egg breaking machinery. Such equipment is used in a number of hotels. Indeed in conversations with hotel personnel familiar with the machine they have applauded the innovative technology. In response to queries as to the comingling of shell with egg content, comments were made to us regarding hand breaking. It was noted for instance that many of the best chefs when cracking eggs by hand crack them on the bowl in which the eggs contents are placed. Further, when hand cracking large numbers of eggs, shell inevitably comingles with the content and sometimes requires straining. Also, when hand cracking the "white" of the egg most often is in contact with the shell.

NEW YORK OFFICE 888 SEVENTH AVENUE ★ NEW YORK N.Y. 10019 ★ (212) 265-4506

The Honorable Tony Coelho
Page two
December 3, 1985

Mr. Chairman, it should be noted that the food and beverage operations now using the centrifugal egg breaking machine use high quality fresh eggs as they did before the machine was marketed. They will continue to do so and would not substitute frozen or liquid egg products if the machine were not available to them.

The centrifugal egg breaking machine is innovative technology, Mr. Chairman. Unless there is just cause for inhibiting innovation, we fail to understand some of the concerns raised except for a concern with competition.

We are recipients of a great deal of material from the United Egg Producers who oppose the machine and coincidentally market the frozen and liquid egg products. After reviewing the material, several things come to mind: 1) we are not scientists; 2) as laymen reading the reports we wonder if the committee should be concerned about the use of centrifugal egg breaking machines or if the committee should direct its oversight to the issue of whether eggs are safe for human consumption - especially lower grade eggs.

It should be noted that the one small business in this country which manufactures and markets the centrifuge egg breaker has not stood idly by during these discussions. They are contacting all users to provide revised and more specific use instructions and are providing a special tray to allow for better visual inspection.

Mr. Chairman, we appreciate the opportunity to present these written comments for the subcommittee's consideration and for the record.

Sincerely,

Albert L. McDermott
Washington Representative

ALM/bjl

STATEMENT OF CONGRESSMAN DON RITTER
BEFORE THE
SUBCOMMITTEE ON LIVESTOCK, DAIRY, AND POULTRY
OF THE US HOUSE OF REPRESENTATIVES
COMMITTEE ON AGRICULTURE
NOVEMBER 21, 1985

There is no credible scientific evidence that contamination from egg shells is any more likely to result from the centrifical egg-breaking machine than when people break eggs manually. Certainly there is the risk of salmonella contamination in any egg mixture. There is, however, no evidence of increased risk of salmonellosis from use of this machine. This was effectively pointed out by Congressman Brown on the floor of the House of Representatives on October 7, 1985:

> This machine has been in use for roughly 5 years. There [are] about 1 million eggs a day being cracked with this machine. By [any] stretch of ordinary arithmatic, I calculate there are several billions of eggs that have been processed through this machine. There is not yet one substantiated case of danger to human health, not one case of salmonella, not one problem, and yet the

> whole basis of the argument ... seems to have been that this is a threat to public health.

This is also the position of the US Food and Drug Administration and the National Centers for Disease Control. In a letter to Mr. James C. Handley, Administrator of the Agricultural Marketing Service, Department of Agriculture, dated October 17, 1985, Dr. Donald R. Hopkins, Assistant Surgeon General, Acting Director of the Centers for Disease Control, stated that the principle public health related difference between traditional methods of egg breaking and this new centrifugation technology is that the new method;

> provides for greater contact between the edible portions of the egg and the egg shell and outer membranes. To determine the potential public health impact of these differences, studies could be undertaken to assess the microbiologic status of eggs processed by currently accepted methods of egg breaking and by the proposed [centrifugation] method.... [This method has] the potential for greater contamination. Whether or not this potential has any practical significance could be determined by the above studies.

Dr. Sanford A. Miller, Director of the Center for Food Safety and Applied Nutrition, US Food and Drug Administration, in a similar letter, stated, "While we are aware that there is a potential for misuse of the centrifuge egg breaking machine by using eggs that may contribute filth to the liquid eggs, such adulteration would be caused by the user and not by the machine."

As a scientist, and as a Congressman who has for years worked to put risks and hazards in greater perspective for the public, I do not believe that the Congress should take any action to ban this new technology without cause. If there is serious concern about the use of this machine, I recommend that appropriate scientific studies be made, rather than instituting an action that would outlaw a technology and bring bankruptcy to those individuals producing this machine.

STATEMENT BY
RONALD A. SARASIN, DIRECTOR, GOVERNMENT RELATIONS
NATIONAL RESTAURANT ASSOCIATION
BEFORE THE
HOUSE AGRICULTURE SUBCOMMITTEE ON
LIVESTOCK, DAIRY AND POULTRY
NOVEMBER 21, 1985

Mr. Chairman, my name is Ron Sarasin, and I am the Director of Government Relations for the National Restaurant Association (NRA). NRA is a trade association consisting of 10,000 members, which represents approximately 100,000 foodservice outlets throughout the United States.

NRA appreciates this opportunity to submit a statement for the hearing record as the House Agriculture Subcommittee on Livestock, Dairy, and Poultry conducts its hearing today on the merits of the "Egg King" machine. I would like to make clear at the outset of my remarks that NRA does not, and will not, endorse or support any particular piece of equipment.

NRA became interested in this issue when we learned of a provision in the 1985 farm bill which would prohibit the use of the egg-breaking machine manufactured by Misa Manufacturing, Inc., and any similar machine which may come on the market.

High volume retail egg users such as bakeries, hotels and restaurants presently have several choices available to them in the preparation of eggs: (a) they can break fresh eggs and separate the egg meat from the shell by hand, basically by breaking one egg at at time. Such a procedure is costly in terms of labor and in the quantity of product recovered; (b) they can purchase pasturized, frozen eggs which utilize egg grades which are not allowed to be sold in retail outlets and which do not provide the cooking attributes of fresh eggs; and (c) they can utilize a machine such as the Egg King which utilizes the highest grades of fresh eggs and, because of the mechanical process, provides great savings in labor costs and waste reduction.

The prohibition added to the committee version of the 1985 farm bill appears to be clearly designed to protect a particular member's constituents, who manufacture the frozen egg product, from competition by the manufacturers of a machine which utilizes a different process. While we certainly understand the motivation behind the prohibition, we question whether the legislative process should be used in an attempt to stop progress.

As stated earlier, the National Restaurant Association does not evaluate or endorse restaurant equipment, nor is it our intention to judge the various health and safety claims that have been made concerning this issue. However, NRA believes that if automation can do the job more effectively then present practices, at a reduced cost to the operator, and provide a better product to the consumer, that progress should not be slowed because of the reluctance by some to adopt new methods.

Many of NRA's members now use these egg-breaking machines and find that they produce an outstanding product, and are an effective and economical way of saving time and labor. An important aspect of the machine is that it allows our member restaurants to use high-grade fresh eggs in contrast to lower-grade frozen, pasturized eggs. This makes the products prepared in restaurants fresher and more appetizing to customers. As in any business, the foodservice industry is constantly seeking ways to improve quality, reduce costs, and avoid waste.

Mr. Chairman, thank you for the opportunity to place our views on the record. We look forward to continuing to work closely with you.

STATEMENT OF THE HONORABLE VIRGINIA SMITH
OVERSIGHT HEARING ON THE EGG PRODUCTS INSPECTION ACT
HOUSE AGRICULTURE SUBCOMMITTEE ON LIVESTOCK, DAIRY, AND POULTRY
NOVEMBER 21, 1985

Thank you, Mr. Chairman and distinguished members of the Subcommittee. I wish to commend you all for your leadership in holding hearings on this issue, which unfortunately perpetuated considerable confusion and controversy on the floor of the House last month.

My interest in this matter stems from my position as Ranking Minority Member of the House Appropriations Subcommittee on Agriculture, Rural Development, and Related Agencies, which provides funding for activities to carry out the intent of the Egg Products Inspection Act. My home state, Nebraska, also happens to be one of the five leading states in production of egg products, with 80 million pounds of liquid egg products in fiscal year 1985.

I presume that the members of the committee are aware of the technical issues at hand with regard to the Egg King centrifuge separator machine. Let me briefly review two major concerns that I am aware of:

--The use of this machine appears to circumvent the intent of the Egg Products Inspection Act. Egg producers are prohibited from using the centrifuge separator, even though they may have Department of Agriculture inspectors on-site. On the other hand, restaurants, hotels, and other retail institutions are able to utilize this machine with no inspection whatsoever.

--The use of this machine has the potential to create a public health hazard. While this issue is highly complex and I do not possess the technical expertise to assess it in full, several facts are clear. It has been scientifically demonstrated that Salmonella bacteria enter the pores of egg shells, and these bacteria cannot be destroyed through normal washing or sanitization procedures. Furthermore, all USDA-established grades of eggs, including AA, have tolerances for dirt on the egg surface. In addition, baking or heating is not equivalent to the pasteurization process--contrary to the manufacturer's claim. Thus, it appears that the centrifuge egg-breaking process, including the comingling of possibly contaminated shell and egg materials, represents a potential health hazard.

Mr. Chairman and distinguished members of the Committee, you are aware that since enactment of the Egg Product Inspection Act in 1970, commercial establishments defined as official egg processing plants (and thus continuously inspected by USDA) have been prohibited from the use of the centrifuge separator to break eggs, ostensibly because of alleged safety risks. The absence of such a prohibition on establishments not under inspection appears inconsistent and possibly imposes an unfair economic disadvantage on egg processors under inspection.

In closing, I must admit that I find it ironic that the House of Representatives is considering this issue, as this would appear to fall under the regulatory auspices of either the US Department of Agriculture or the Food and Drug Administration. In any event, I fervently hope that this matter can be resolved in a satisfactory manner as soon as possible.

Again, thank you for this opportunity to testify on this important matter. I would be glad to answer any questions.

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